

The Davis Press, Inc
Worcester · Massachusetts
Publishers

The School Arts Magazine is indexed in the Readers' Guide to Periodical Literature and the Education Index

Contributing Editors

WILLIAM ANDERSON
Supervisor of Art
Wichita, Kansas

ALICE STOWELL BISHOP
Supervisor of Art
New London, Connecticut

ELISE REID BOYLSTON
Assistant Supervisor of Fine and Industrial Arts
Atlanta, Georgia

VERNETT J. LOWE
Highland Park, Illinois

BESS FOSTER MATHER
Supervisor of Art
Minneapolis, Minnesota

ALFRED G. PELIKAN
Director, Milwaukee Art Institute, Milwaukee, Wisconsin

JANE REHNSTRAND
Head of Art Department
Wisconsin State Teachers College, Superior, Wisconsin

CLARA P. REYNOLDS
Director of Fine and Industrial Arts, Grammar and High Schools, Seattle, Washington

NELL ADAMS SMITH
Director of Art

BEULA M. WADSWORTH
Director, Children's Art Center, Tucson, Arizona

Business Department

INEZ F. DAVIS
Circulation Manager

PAUL F. GOWARD
Business Manager

ALLISTON GREENE
Advertising Manager

Subscription Rates

United States, \$3.00 a year in advance

Canada, \$3.25 Foreign, \$4.00

Canadian Subscription Representative
Wm. Dawson Subscription Service Limited
70 King Street, East, Toronto, 2

Copyright 1937
by The Davis Press, Inc.
Worcester, Massachusetts

SCHOOL ARTS

A PUBLICATION FOR THOSE INTERESTED IN ART EDUCATION

Pedro J. Lemos
EDITOR

DIRECTOR, MUSEUM OF FINE ARTS, STANFORD UNIVERSITY, CALIF.

VOL. 36. NO. 10

CONTENTS

JUNE 1937

ART AND FIREWORKS—AN EDITORIAL	<i>Pedro J. Lemos</i>	579
WHY QUESTION SUPERVISION? . . .	<i>Blanche Lucas</i>	580
A CLASSROOM EXPERIMENT WITH DRYPOINT	<i>William S. Rice</i>	581
A FIVE-IN-ONE HANDICRAFT	<i>Pedro J. Lemos</i>	587
SCRAPS OF WOOD	<i>Beulah Hilton and Francis Prentice</i>	591
DESIGNING TEXTILES	<i>Dorothy M. Rising</i>	592
VOLUME IN DESIGN	<i>Gertrude Evans</i>	594
ART METAL WORK	<i>Louis J. Haas</i>	596
SLIP POLISHED AND SLIP PAINTED POTTERY	<i>Norma L. Diddel</i>	603
A MODERN WASTEBASKET	<i>Stella W. Wider</i>	607

OPEN-UP PAGE SECTION

Rubber Ball Toys	609-610
Round Zipper Purse in Leather	611-612
The Dinkey Bird	613-614
Summer Camp Projects	615-616
A Modern Wastebasket	617-618
Practical Book Covers	619-620
Patterns and Tools for Stamping Metal	621-622
A Lesson in Bas-relief and Round Carving	623-624
 "A B C" ABOUT BRASS AND COPPER	<i>Natalie Wilkinson</i> 625
SIXTH GRADERS FORM CRAFT GUILDS	<i>Mary Emma Harris</i> 629
TWO SUMMER CAMP PROJECTS	<i>Nadia Thorpe</i> 631
CEMENT STEPPING STONES	<i>Margaret J. Sanders</i> 636

All communications, except articles submitted for publication, should be sent to
The SCHOOL ARTS Magazine, Worcester, Massachusetts



1



Figure
CONSTRUCT-
ion
draw-
ings
from
Czecho-
slovakia



- 1 Impressive
- 2 Expressive
- 3 Constructive



2



3

HEAD AND FIGURE DRAWINGS FROM CZECHOSLOVAKIA
SHOW INTERESTING AND CONSTRUCTIVE HANDLING

ART AND FIREWORKS

AN EDITORIAL

WE HAVE reached the stage where life has become so competitive that any achievement, no matter how wonderful, to receive recognition must be announced from the housetops. Even then while we crane our necks to catch the glittering neon display on the housetop another competitor casts a searchlight on a more vivid and blatant array on the hillside to rob the housetop of its vantage, and tomorrow the aeroplane skywrites an advertisement nullifying the fireworks of the night before.

This hysterical nervous strain for publicity continues until, like the overcrowded lighted white ways of our cities, all of it is offset by becoming so blaring and blinding that the prospective purchasing customer sees only a great glare and acquires a headache instead of the goods advertised.

This is the condition that art has almost reached in America. The artist who seeks for calm but joyous nature expressions, the subtle quiet qualities of Innis or Turner, or other great masters, finds his pictures squelched in an exhibition by the "fireworks" of the modern artist. No longer is art a means as expressed by Goethe "to produce the illusion of a loftier reality," or that "the learned can understand the reason of art and the unlearned feel the pleasure," according to Quintilian, but today artists paint in frenzied competition for attention against scores of other fireworks forms of publicity.

Art subjects today portray things either in riddles, or so sordidly that many former patrons of art have turned away. They formerly found rest and mental delight in the artist's recording of the many delightful and clean subjects with which nature abounds, and acquired such pictures for

their own homes. Complaints today are made because art patrons are missing. The reason is easily guessed.

Many of our magazines are commencing to increase the type of suggestive and salacious illustrations. Gradually our forms of art entertainment are becoming debased and, if there ever was a time when the art teacher could improve our students' moral taste in picture matter, the time is now.

Every good thing has its counterfeit and art is no exception. Art has been and always will be a great social and moral influence. It is no excuse to say that vulgar exhibitions of art are but reflections of the time. It may be that vulgar art has but created the time, and certainly is no deterrent to the present life, if encouraged.

Great art need not be spectacular. The thousands of square feet of spectacular, morbid murals placed on our many civic building walls in recent years will yet disappear when the better civic minds arise and appear with the pail and mop brush that has so long been needed. Art can be the quiet nature subject, with a great influencing, ennobling message and not the noisy, agitating "fireworks" subject, with a rabid suggestion.

This verse by a Navajo child conveys a message worthy of deep thought in these hectic art times:

"Beauty moves—	It is still.
Like a dancer,	It doesn't move
Or water falling	Like a silver necklace
But sometimes	Or a sand painting."

Pedro J. Bemis

WHY QUESTION SUPERVISION?

BLANCHE LUCAS

Allentown, Pennsylvania

THE choice between art instruction through supervision or by specialist teachers, free to follow individual methods, cannot become a question for final decision without an unprejudiced survey of the conditions under which each form of instruction operates.

No form of art supervision can be successful if the supervisor is a victim of local handicaps.

Art supervision is a type of school function decidedly different from all other forms of supervision.

Art as applied to graphic, plastic, or cultural development through appreciation, demands a more intensely diligent preparation than any other phase of modern education.

Music education, like mathematics, is based upon certain positive standards of invariable status. The major scale remains distinct from the minor. Key signatures are recognized by the position of "do." The dominant chord resolves on the tonic. Treble notes do not appear on the bass clef. Permanent principles like mathematical laws denote the difference between right and wrong, remaining fundamentally fixed. This is not equally true of art principles.

There are no statutory sign posts in art education. Tastes, fads, and fancies with constantly changing standards; modes, isms, and spasms invade the field of art with persistent influences, swaying credulous instructors into cycles of varying enthusiasms.

The successful art supervisor must not only combat existing changes and sudden revolutions but she must anticipate future changes and toppling art principles. Her preparation to cope with uncertain develop-

ment demands constant growth. The art supervisor may never settle into a joyous contentment, with the notion that she has acquired an acceptable standard. She must keep an open mind, an alert perception, and a superior intellect.

Any supervisor who is overworked, held down by an inflexible schedule, or hampered by narrow-minded officials, has no real chance to become efficient.

The successful art supervisor must be one who has time for self-expression, learning to do by doing and having learned the lesson, it must be kept alive through practice. There must be a renewal of inspiration. The creative flame needs refueling. Salaries must be adequate to provide sufficient money for travel. New scenes, fresh beauty, unfamiliar environments, etc., these are not luxuries but necessities for every art instructor.

The supervision of art is frequently defeated by desperately unfortunate circumstances controlling the job. Not every school superintendent senses the necessity for favorable conditions as my own superintendent does.

Where supervision is abolished in favor of the employment of individual art specialists there still remains the problem of local circumstances. Far too many school authorities are deluded by the false impression that any good teacher can teach art whether she has had special training or not. Common sense and truthful criticism, devoid of flattery, are the only required attributes in their estimation. These erroneous conclusions are usually accepted by educators who know nothing about art. Their arguments are supported by the belief that the artist could not become a teacher. "Teachers who can draw are too apt to draw for the pupils," they declare. Drawing *for* children like singing *with* children is the eternally unalterable taboo. Opinionated judgment, too frequently the result of ignorance, is the curse of enlightenment. Many who know nothing can convince those who know less and the bliss of stupidity makes wisdom seem foolish.

A CLASSROOM EXPERIMENT WITH DRYPOINT

WILLIAM S. RICE

Head of Art Department

Castlemont High School, Oakland, California

A KNOWLEDGE of the process of etching and its kindred art, drypoint, always has a fascination for the art student in the high school. Although we started out with a limited equipment for drypointing, we found that surprisingly good results could be obtained nevertheless.

The materials necessary for our experiment included some sheets of heavy celluloid (twenty by one thousand gauge, procured at a local art supply store). We found that we could use thicker gauges but never thinner. The heavier celluloid is easier to handle and gives a much deeper, therefore a more satisfactory plate mark in printing.

We also decided to invest in a professional drypoint needle, costing seventy-five cents, although we did some satisfactory engraving with phonograph needles set in eversharp pencils. A sheet of black paper or cardboard and a pencil sketch to provide the subject matter completed our initial equipment. There were other materials needed which will be mentioned later on.

The students made original pencil sketches from outdoor subjects. (Copies were taboo.) Then we laid the transparent celluloid plate, which had been cut to suit the individual pencil sketch, on top of the sketch. Both plate and sketch were securely thumbtacked to a drawing board to prevent slipping.

When we traced with the needle on the smooth, polished surface of the celluloid, we found that the needle scratched the material easily for delicate lines, but when depth or firmness were required, considerable pressure was necessary to obtain the desired degree of blackness.

After the main outlines were scratched on the plate it was removed from the drawing. A sheet of black paper was slid under it and both were tacked to the drawing board. The white outlines now stood out decidedly against the black background.

Now the real work of shading the subject began. We used our needle very much as we would a pen in making an ink drawing, using simplified lines to express the design in light and dark.

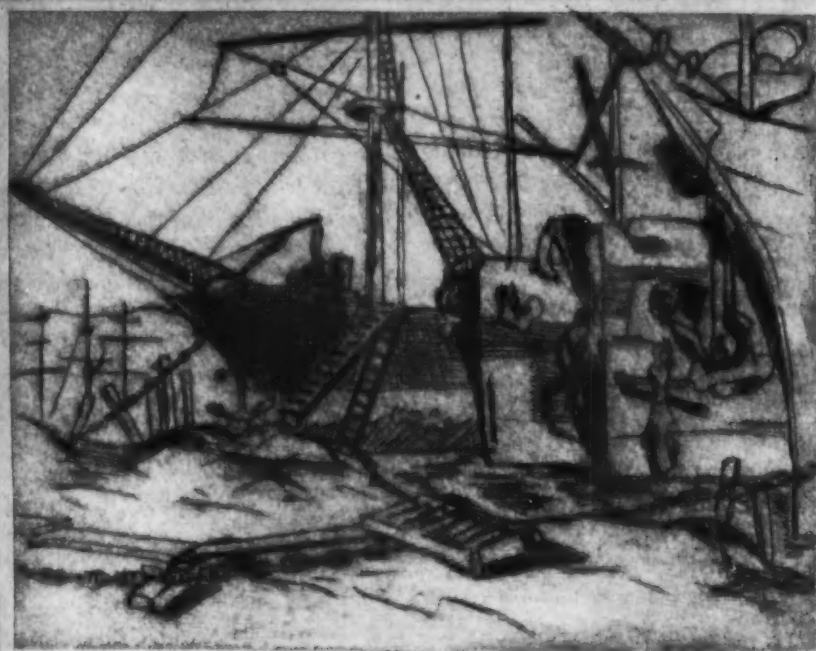
Good examples of etching were placed before the students in order to give them some idea of the technique required. This helped greatly.

It was necessary at times to hold the plate up to the light in order to see whether or not the line scratched formed a satisfactory composition. We often found it necessary on such occasions to add extra lines where they had been omitted through an oversight.

The next step was to slightly bevel the edges of the celluloid plate with a fine-toothed file or a piece of emery paper glued on a board. This was done to prevent the paper from tearing as it undergoes the heavy pressure of printing.

By this time we were ready to make our proof, but first the paper had to be prepared for printing. We tried several kinds, regular white drawing paper, mimeograph paper, and U. S. government post card stock. We liked the post card stock best because of its warm color and its sensitive surface.

The paper was cut in sheets about eight by ten inches, so that we had plenty of space around the plate for trimming if necessary. In order to print, the paper must be wet. A tin tray nine by twelve inches purchased at a hardware store was filled with water and the sheets of paper immersed in it for about fifteen or twenty minutes until the fabric of the paper was thoroughly wet. Then we picked up the sheet by the corners, allowing the excess water to drip off, and pressed it between two blotters. The paper for printing must be thoroughly damp but not shiny wet on the surface in order to get good results. For inking the plate we used a tube



Old Schooners

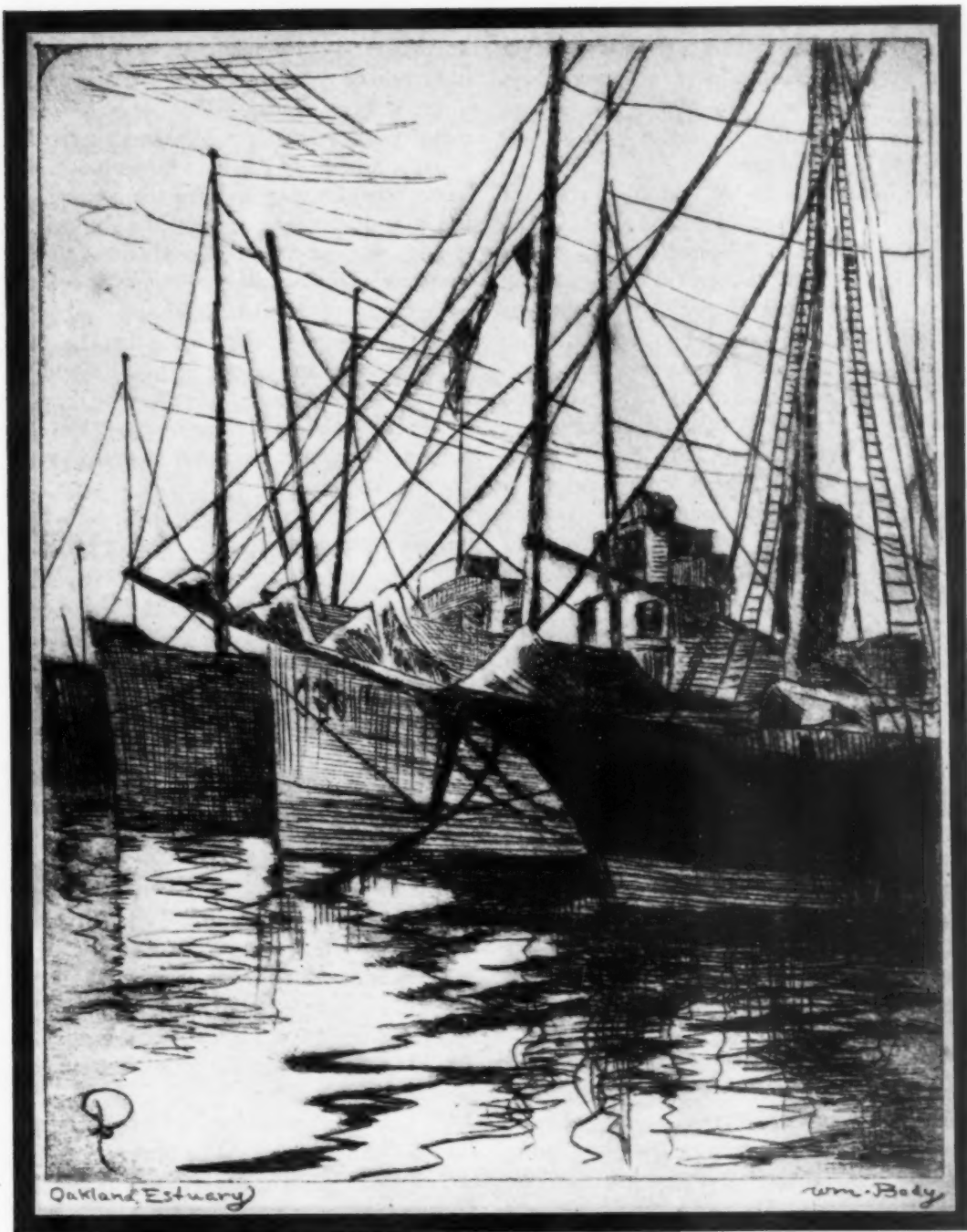
Bill Rice



Back Yard

W. Randal

ETCHINGS DONE BY MR. RICE'S STUDENTS AT CASTLEMONT HIGH SCHOOL, OAKLAND, CALIFORNIA, FOLLOWING THE METHOD DESCRIBED BY MR. RICE IN THE ACCOMPANYING ARTICLE



AN ETCHING BY A STUDENT AT CASTLEMONT HIGH SCHOOL, OAKLAND, CALIFORNIA. WILLIAM S. RICE, HEAD OF ART DEPARTMENT

of black etching ink, a small portion of which was spread out on a pane of glass. A few drops of burnt linseed oil were added to thin the consistency of the ink after it came from the tube. A palette knife greatly assisted us in this process.

To ink the plate we laid it down on a sheet of typing paper placed on a table. The ink was applied to the plate with an instrument known as a "dabber." This is made up of a compact wad of cloth, over which is stretched tightly and smoothly, with no creases, a square of chamois or ooze leather. A piece of kid from an old glove may be used for this purpose. We placed the chamois over the wad of cloth and tied it down securely. The free ends were used as a handle. The ink was then dabbed over the plate with a sort of wrist motion, over and over and across, working the ink thoroughly into the engraved lines of the plate.

We next took a generous piece of mosquito netting, well crumpled up in the hand, and then neatly shaped it into a ball which was gently rubbed back and forth with a circular motion on the plate until the design came up and the light places began to stand out. Clean pieces of typing paper were slipped under the plate from time to time during the process of wiping in order to tell when we had inked it sufficiently.

A clean wipe was next made by using the palm of the hand, rubbing gently back and forth across the plate. This latter process necessitated frequent wiping of the hand as well.

A home-made etching press was used for the printing. This press being constructed mainly of wood necessitated a plate of brass, one-eighth inch thick, to be used as a press "bed."

On this "bed" a sheet of typing paper was laid, next to it the inked plate, right side up. The dampened paper was next placed over the plate, a blotter came next, and lastly a double layer of heavy felt. The whole was finally run through the rollers of the press. We had the greatest excitement when we "pulled," or peeled off, our first proof.

If an etching press is not obtainable (and

they are just about as scarce as hen's teeth), an ordinary old wash wringer with extra hard rubber rollers may serve the purpose, if properly adjusted. One must place a metal plate between rollers and screw the top of the wringer down as far as it will go. Pliers must be used to turn the screws, for the utmost pressure is needed to obtain a strong, crisp print. Attach this wringer to a strong table or bench, bracing the sides with blocks of wood nailed to the table to keep the wringer upright while turning.

Whichever kind of a press you happen to use you will find it exciting to see the results, however poor some of them may be. Experiment and perseverance will soon reward your patient labors.

The prints after being "pulled" were laid out on newspapers to dry. If any of them were inclined to be uneven they were ironed on the back with an ordinary hot iron.

Matting the best prints in the usual fashion greatly enhanced their looks. White bristol board, kid finish, was used for the purpose.

Here are some of the difficulties which you may encounter in this drypoint method with your students, and means by which they may be eliminated.

If your prints are:

Too pale—you did not use enough pressure or you over-wiped your plate.

Too dark—wiping was not carried far enough.

Print spotty—paper was dampened unevenly or one side of your press was screwed tighter than the other.

To have perfect control of tools, always cut lines and pull the needle toward you, up and down. Turn plate (thumbtacked to drawing board) around accordingly. It is advisable to keep a small piece of celluloid handy on which to try out different line values, also to find out if tools are sufficiently sharp.

Sharpen tools every few minutes in order to do your best work.

One may use either black or brown etching ink or make a blend by using both to-

gether thinning to the consistency of thick oil paint with a few drops of plate or burnt linseed oil.

The consistency of the printing ink must be judged by the nature of the design to be printed; a design or plate with many lines will need thinner ink than one done in simple outlines. Ink may be kept from day to day by piling it up in a saucer and filling it with water.

In choosing papers for printing one may experiment with a number and obtain interesting results. Regular etching papers are sold at art supply stores but are too expensive for school use.

I have found regular stationery linen papers quite effective and correspondence cards are nice for holiday or greeting cards. Then one may have envelopes to match. One may pull proofs in inexpensive papers—even wrapping paper. Thin Japanese papers cannot be soaked, of course, but if these are desired, just dampen blotters evenly, draw the sheets of rice paper through the pan of cold water and place them between the dampened blotters until the plate is inked, then the paper will be all right to use.

You may be surprised on making your first proof, in two ways, first, that the design is reversed and, secondly, that the composition appears to lack unity. One may therefore continue the process of scratching extra lines until a better result is obtained. Compare the resulting proof with your original sketch and keep on adding lines until you finish the plate to your complete satisfaction.

Once you have mastered the various steps involved, you will be delighted with the variations you may obtain in your prints. Since a drypoint has both line and tone, an indefinite number of effects can be obtained by the way you wipe the plate. This method of making prints is often erroneously called Drypoint Etching. Etching is an entirely different and more complicated process which involves the use of copper plates, wax, nitric acid, and asphaltum varnish. The word etching comes from the Dutch word *etsen* meaning to eat, which refers to the biting, or the action of the acid on the copper plate.

But that is another story and a process for a later experiment in the classroom.





THE TYPE OF LINE DESIGNS THAT ARE SUCCESS-
FULLY USED IN THE FIVE-IN-ONE HANDICRAFT METHODS

A FIVE-IN-ONE HANDICRAFT MAKING LINOLEUM DO THINGS

PEDRO J. LEMOS, *Director*

Museum of Fine Arts, Stanford University, California

PLAYING and experimenting with the various handicrafts is intriguing and exciting, making up for the many disappointments and failures that come with the trying of many mediums. So often the greatest finds in the arts and crafts have been those discovered by accident. For instance, three of the great printing processes, aquatint etching (the beginning of our roto-gravure illustrations), lithography, and the great modern printing by offset process were all accidental discoveries. Aquatint was discovered by a medieval period night sentry who noticed a nondescript pattern corroded on his gun barrel by the night dews. Rubbing ink in this corrosion and transferring the ink by pressing paper against it a new process for printing came to light. Senefelder discovered lithography when hurriedly jotting down a laundry memo on a slab of stone with a grease pencil. He later found that the method solved his long sought quest for an economical printing method. An accidental printing or offset of an impression on a rubber blanket resulted in an excellent printing onto the next sheet of paper and thereby the offset printing came into being, permitting the finest engravings to be used on soft or rough papers.

When the craftsman finds two ways to apply the same handicraft tool or medium it is a find, but when he finds five ways of using the same block it is news. Therefore, the reason for this article on a five-way or "five-in-one" handicraft. To briefly show these five ways a diagram with this article shows the ideas and following are the five

School Arts, June 1937



THESE ILLUSTRATIONS SHOW THE FIVE USES
THAT CAN BE MADE OF ONE LINOLEUM BLOCK

applications from the one block explained in detail.

CUTTING THE BLOCK. Thick linoleum or "battleship linoleum" is best for cutting the

BLOCK A



Linoleum
Block
cut with
V Gouge

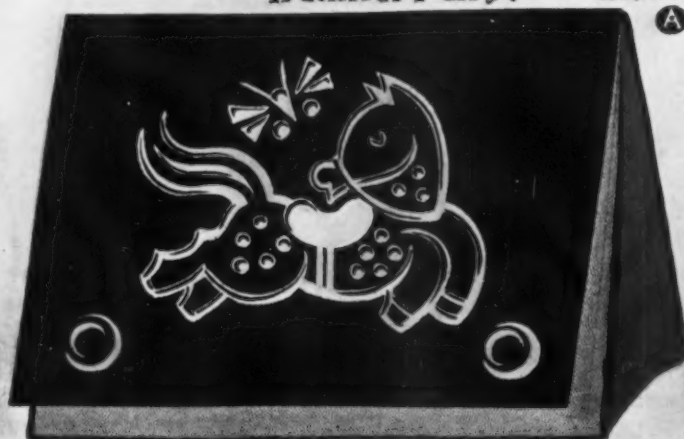
or with
the
U Gouge



The
Relief
Print
used
as a
Greeting
Card
from
BLOCK
A



Leather Purse Stamped
with Block
A



MANY PRACTICAL ARTICLES CAN BE MADE FROM THE SAME LINOLEUM BLOCK, AS DESCRIBED IN THE ACCOMPANYING ARTICLE BY PEDRO J. LEMOS



TWO APPLICATIONS OF THE LINOLEUM BLOCK ARE SHOWN ON THE OPPOSITE PAGE. THE ABOVE GROUP SHOWS THREE MORE USES OF THE SAME BLOCK. THE TEXTILE PRINT, THE CEMENT TILE AT THE TOP AND, LAST BUT NOT LEAST, THE LINOLEUM BLOCK MOUNTED AND FINISHED AS A SERVICEABLE TEA TILE

block. To make easier cutting, warm it before a flame or on a radiator. Cutting tools for linoleum or wood securable from dealers in handicraft tools have various shaped cutting points. A gouge V-shape or U-shape may be used for the cutting. A fairly deep and clean cut of the pattern should be secured. A pattern mostly in line is preferable for this type of work. A page of suggested designs is given to illustrate how complete a design may be when only uniform lines are used. The design may be sketched directly on the block or on a piece of paper and then transferred by carbon or other transfer paper onto the linoleum. It should be remembered that the block will appear in reverse position on the impression and the transfer should be planned accordingly. A piece of linoleum should be a little larger than the size desired to allow for any breakage of edges while cutting and handling. Just before using, the extra part may be cut off.

FIRST USE AS A RELIEF BLOCK. With an ink roller or a brush cover the block with a

color ink, either using artists' tube oil paints or printers' ink. The ink or paint should not go into the carved portions, but should remain only on the surface of the block. To print this block on cloth, the cloth is placed on a pad of newspapers and the inked block placed carefully in position face down and struck with a rubber or wooden mallet. Or it may be printed through a clothes wringer, being first placed on a heavy cardboard, two layers of felt or flannel covering the textile and inked block. If the block is large it should first be mounted on a block of wood about one inch thick. By placing the newspaper pad on the floor and the inked block on the textile and standing on it with one foot and teetering slightly, a "good impression" will result on the textile. The heavier the printer the easier it is to make a good print.

SECOND USE AS AN INTAGLIO OR RELIEF PRINT. With a brush cover the entire surface of the block with a color paint or printing ink. Brush it well into all the carved lines, filling the grooves. Make a pad of tarlatan

cloth or of mosquito netting by taking a square of the fabric and turning all the edges inward until a good pad is secured. This stiff surfaced pad is used to take off all the ink on the surface of the block, leaving the ink in the lines or grooves. Dampen a piece of drawing paper, placing it over the linoleum block. Place these on a piece of building board or thin wooden board such as three-ply wood and, covering the lot, run it through the clothes wringer using considerable squeeze. This will result in a print on the paper in relief, giving an attractive modeled line design for use as a greeting card, booklet cover, or bookplate purposes. Gasoline should be used to thoroughly remove all ink remaining in the grooves of the block so it will be in clean condition for further use.

THIRD USE FOR LEATHER STAMPING. The same block may be used for stamping a design on dampened leather for leather purses, book covers, belts, book supports and many other applications to leather craft. Strips of wood should be used along the sides of the leather, to avoid the rollers pressing any part of the extra leather other than the leather under the block. The felt padding should be kept between these strips of wood or "bearers" to insure the pressure coming on the block only. A mallet may be used to make this impression if the block is a small one, and for such use the linoleum should be mounted on a block of wood with glue and a tack or two in the

grooves where they will not affect the print.

FOURTH USE AS A TILE MOLD. The block may be brushed with linseed or salad oil and surrounded with blocks of wood about an inch higher than the linoleum edge. Stones or small weights will hold the blocks in position. Mix ordinary Portland cement adding oxide dry colors to the cement to secure desirable colors and pour into this mold. After twenty-four hours remove wood blocks and cement tile is released. Place in water for two days to harden, permit to dry, and then polish with beeswax. Other effects may be secured by adding cement colors to the tile when first removed from the mold. It may have cement colors dripped or painted into the spaces between the relief lines of the tiles, producing very charming tile qualities. "Color Cement Handicrafts" published by The Davis Press, Inc., Worcester, Mass., gives a number of ways of doing cement tiles that are easily adaptable and simplified by the use of linoleum blocks.

FIFTH USE AS A TEA TILE OR FOR PART OF A DECORATIVE PANEL. The linoleum block may now be used in its fifth or last use by mounting it on a wood block. The block may be carved to receive the linoleum and the edge of the block decorated with a carved line or with decorative nail heads. A thin brass, aluminum, or copper edge may be used around the block and with a piece of suede leather on the bottom the tile remains as a practical piece of handicraft, a reminder of its other four artistic and practical uses.

"BY BEAUTY OF SHAPES I DO NOT MEAN, AS MOST PEOPLE WOULD SUPPOSE, THE BEAUTY OF LIVING FIGURES OR OF PICTURES, BUT I MEAN STRAIGHT LINES AND CIRCLES, AND SHAPES, PLANE OR SOLID, MADE FROM THEM, BY LATHE, RULER, AND SQUARE. THESE ARE NOT LIKE OTHER THINGS, BEAUTIFUL RELATIVELY, BUT ALWAYS AND ABSOLUTELY."—*Plato*

SCRAPS OF WOOD

BEULAH HILTON, *Teacher*
FRANCIS PRENTICE, *County Art Supervisor*
LaPorte County, Indiana
(See "Open-up Section")

MANY teachers have doubtless found themselves in a position similar to mine. For some reason the old, tried projects in art failed to have any attraction to the children I am teaching this year. We had laid special stress on design for several weeks, but a design made in pencil, crayon, or paint failed to arouse the proper enthusiasm.

In every progressive school in our country today a special endeavor is being made to give art training to every individual, no matter what his abilities or background may be, but these fifth and sixth grade children were deriving little benefit from their art, simply because they were not interested. We tried placing the designs on pillow tops and hot dish pads, but this we had done before and it did not appeal to the class. It was plain to be seen that we must try something we had never tried before. But what would it be?

In the two months that I had had these children I had noticed they especially liked to work with their hands, so therefore it was decided to give them work that required manual construction. We had never worked with wood; why not try it?

A little enthusiasm was shown when the children were told to bring scraps of wood to art class. To them this was something different, and it might be fun! At any rate, it could not be much worse than the "art" they had been having. They became a little more interested when they were told they might use these scraps of wood to make book-ends, book shelves or other articles.

The next art period, they produced their scraps of wood, and they had taken literally my suggestion that scraps would do and had everything from cigar boxes to two-inch oak planks.

Usually it is one thing to present a problem and another to carry it to completion, but not so in this case. My class seemed changed over night. They were now alert, open to suggestion, and ready to give suggestions themselves. The boys liked this work because it was not in the least girlish, and the girls liked it because they had not tried to saw, plane, hammer, etc., before and they were proud of themselves when they found they could really do it.

Children who had had no patience before now, worked carefully and slowly, and if they made a mistake willingly corrected it. They made many designs and when they found one to their liking they carefully transferred it to their project with carbon paper, painted it with poster paint, and then shellacked it. They got the ideas for their designs from art books, magazines, jewelry, and one little girl copied the design on a compact. When completed they were proudly taken home to be given then to their mothers or to be saved to use for presents.

I am sure this work has been of substantial benefit to these boys and girls, for now we are beginning to make Christmas gifts and again each child has collected scraps of wood and eagerly awaits the art period when he may work on his towel rack, hot pad holder, thread holder, etc. There is now more individuality shown in the work, and they really have begun some worth-while projects. Next to the individuality shown, I think the most encouraging thing about it all is the fact that they are satisfied only with work well done. However, if nothing had been gained but the enthusiastic response, I think it would have been worth our time and effort.



DESIGNING TEXTILES

DOROTHY MILNE RISING

Seattle, Washington

ONE of the most valuable problems for senior high school art students is the designing of textiles. Through such a problem, a class will learn that it is absolutely necessary to start with a definite plan, in order to obtain a successful result. Not only should that plan incorporate the design principles, but in it one kind of line should predominate.

First, perhaps we had better discuss the various kinds of line, before noting the application of principles. There are four kinds of line—vertical, horizontal, diagonal, and rhythmical, and their correct use may be found in all great art. For instance, in Giotto's work, vertical and horizontal lines predominate. Titian, on the contrary, makes greater use of diagonal lines. Raphael's "Madonna of the Chair" is composed more largely of rhythmical lines. A glance at the illustrations accompanying this article will show a predominance of diagonal line. Modern designers, more than designers of the past, use diagonal lines, probably because they produce a more dynamic effect.

Besides having a dominance of one kind of line, there should be a concentration of dark and light, with more of one than the other. An equal amount of dark and light should always be avoided. If three values are used, two of them should always be close, and the third a strong contrast. In the illustrations, both textiles were printed on tan sateen, the "family" design being executed in dark red, and the leaf design in dark brown and blue-green very close in value. An accent of strong contrast is found in the center of interest in each unit.

Having a center of interest is one of the design principles alluded to. It is the principle of "subordination." The violin player was subordinated to the architect, in the

"family" textile, for purposes of design. Surrounding shapes were made smaller and given less accent than the leaf in the other textile. Thus were centers of interest secured in the respective textiles illustrated.

We have already discussed line, but that links up with the design principle of "opposition," which is obtained by using lines at right angles to each other. Both illustrations show diagonal lines in opposition. This principle is also one much stressed by moderns. Formerly some means of "transition" of line was introduced, but nowadays it is agreed that the stronger opposition is more effective.

Modern designers have a little trick way of securing the principle, "balance." They often reverse values. As an example, the leaf is light on one side and dark on the other. The background comes dark against the light on one side, and gray against dark on the other. So on with units throughout the design.

Last, but not by any means least, is the design principle of "rhythm." This may be produced by repetition of units, as in a surface pattern, or may take the form of related movement.

In the case of unit repetition, the units might follow each other in a straight line. Often, however, it is more interesting to use a "slide" or "drop" repeat, with the second unit falling in the middle of the preceding one, either vertically or horizontally. This plan has been followed in both of the illustrations. Another very important point, which is often overlooked, is that edges of a unit should be free, so that the design will carry from one unit to the next. In all designing we must constantly think of "unity." This overlapping of edges helps knit the design together.

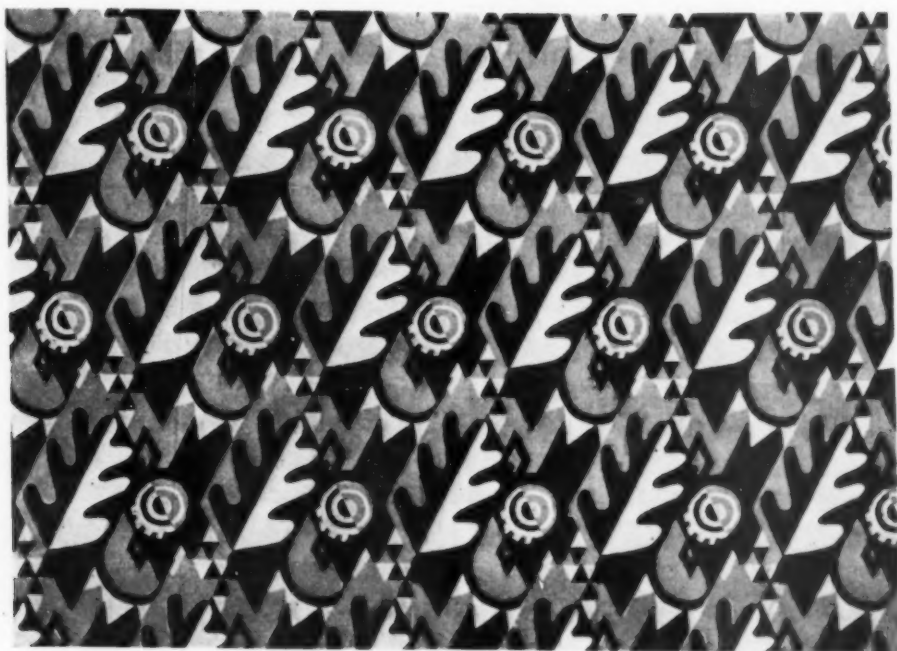
There are many sources of inspiration for design, but character of form should be sought. It is amazing how much character can be produced by using geometric divisions, circles, squares, triangles, and rectangles. Flowers or leaves, reduced to geometric lines, or combined with geometric lines, are often effective. Sometimes in a block-



A COLORED CHALK DRAWING BY EDITH PYLE, UNDER THE INSTRUCTION OF GERTRUDE EVANS OF THE ROOSEVELT JUNIOR HIGH SCHOOL OF SAN DIEGO, CALIFORNIA. THE PROBLEM WAS ONE OF COLOR AND COMPOSITION, USING A CUP OR CYLINDRICAL SHAPED FLOWER

School Arts, June 1937





TEXTILE DESIGNING IS A VALUABLE PROBLEM FOR SENIOR HIGH SCHOOL ART STUDENTS. THESE ATTRACTIVE DESIGNS ARE BY STUDENTS OF DOROTHY MILNE RISING, SEATTLE, WASHINGTON

printed textile, novel effects can be secured through technical modifications, dots, cross-hatchings and small flower forms. This is

exemplified in the "family" design. Animals or figures are good sources of inspiration, and usually produce original motifs.

VOLUME IN DESIGN

GERTRUDE EVANS

*Roosevelt Junior High School
San Diego, California*

IN THESE days when we are directing so much more attention to the expression of volume in our drawings and designs, I have sought for new problems to interest my classes.

Most of the students in an eighth grade class understand the drawing of round objects in line but it is necessary to review the drawing of the ellipse. From that we go into the expression of light and shade on various simple round objects through the use of water color or crayon as a medium.

Then the class is ready for a creative

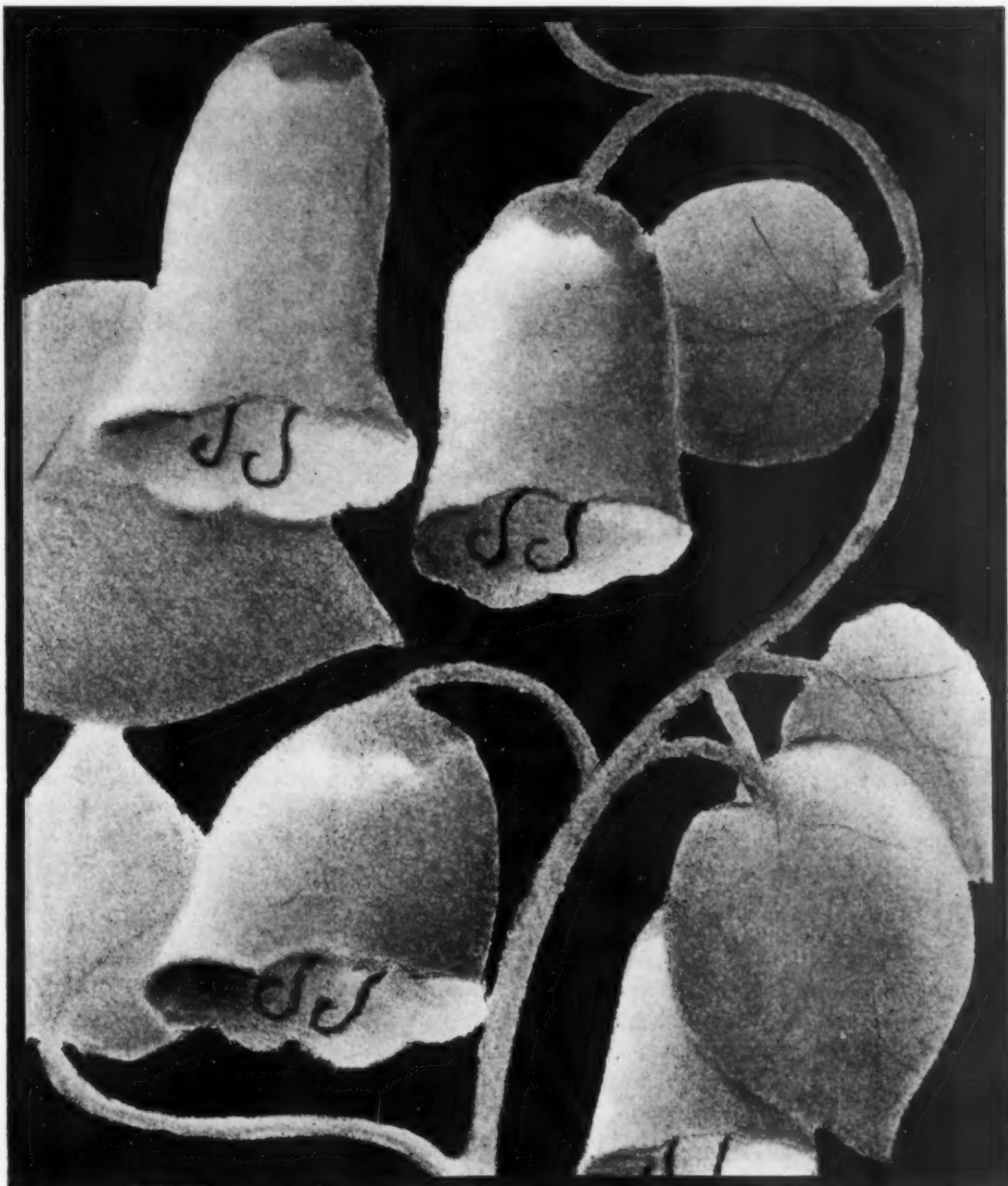
problem in a new medium. The problem is to make a composition in colored chalk using a cup or cylindrical-shaped flower form and leaves. It is necessary to make many little sketches of such shapes before selecting the best for the composition.

The colored chalks are somewhat "messy" at first, but the result is lovely clear color which has been easily blended and has even stood for considerable working over.

The first year we did this problem, we were grieved to find the lovely chalks were so easily smeared and that if we used charcoal fixatif, the colors were darkened and grayed. We have since overcome this entirely by making a new fixatif out of cream paste. We put the ordinary school paste through a sieve and mix it with water until it is about like milk, then we spray it on the drawing with a fly spray purchased from a ten-cent store.



COLORLED CHALK FLOWER FORMS BY STUDENTS AT
ROOSEVELT JUNIOR HIGH SCHOOL, SAN DIEGO, CALIFORNIA



COLORLED CHALK IS A SPLENDID MEDIUM TO USE IN OBTAINING VOLUME IN DESIGN, AS IS SHOWN BY THE WORK OF HIGH SCHOOL STUDENTS OF GERTRUDE EVANS, SAN DIEGO, CALIFORNIA

ART METAL WORK

LOUIS J. HAAS, *Director*

Men's Therapeutic Occupation

Bloomington Hospital, White Plains, New York

THE worker in metals had organized a technique which contributed much to the progress of his time before the beginning of recorded history. Examples of the craftsmanship of these early metal workers represent today universally understood records of those remote times. Throughout the ages craftsmen have contributed through a technique that has grown richer and fuller with the giving. With the coming of the machine came a decline in craftsmanship, although metal work is just as much, if not more, a part of the very fabric of modern life than before the advent of the machine.

Now, there is developing a steady revival of the handicrafts. The machine cannot compete in a field where individuality, originality, sincere workmanship, and the joy of self-expression are all combined with good sound construction.

In this brief chapter, only a few of the simplest and most basic principles may be presented. These must be modified, to permit the student to produce several projects which may serve as a brief introduction to the vast technique of art metal work. It is hoped this contact will inspire the worker to rediscover, for himself, the heritage of craftsmen of every age—the joy of serving through fine craftsmanship.

Today, the worker does not begin as the earliest craftsmen did, with the procuring of the metal from the earth by crudely smelting it from the rich ore. Puddling it into a crude ingot, he then, by laborious pounding with rude hammer, had to forge it into the rough shape, size, and thickness needed to construct the object. All this is done before the metal reaches the present-day craftsmen; but certain things thus learned by the primi-

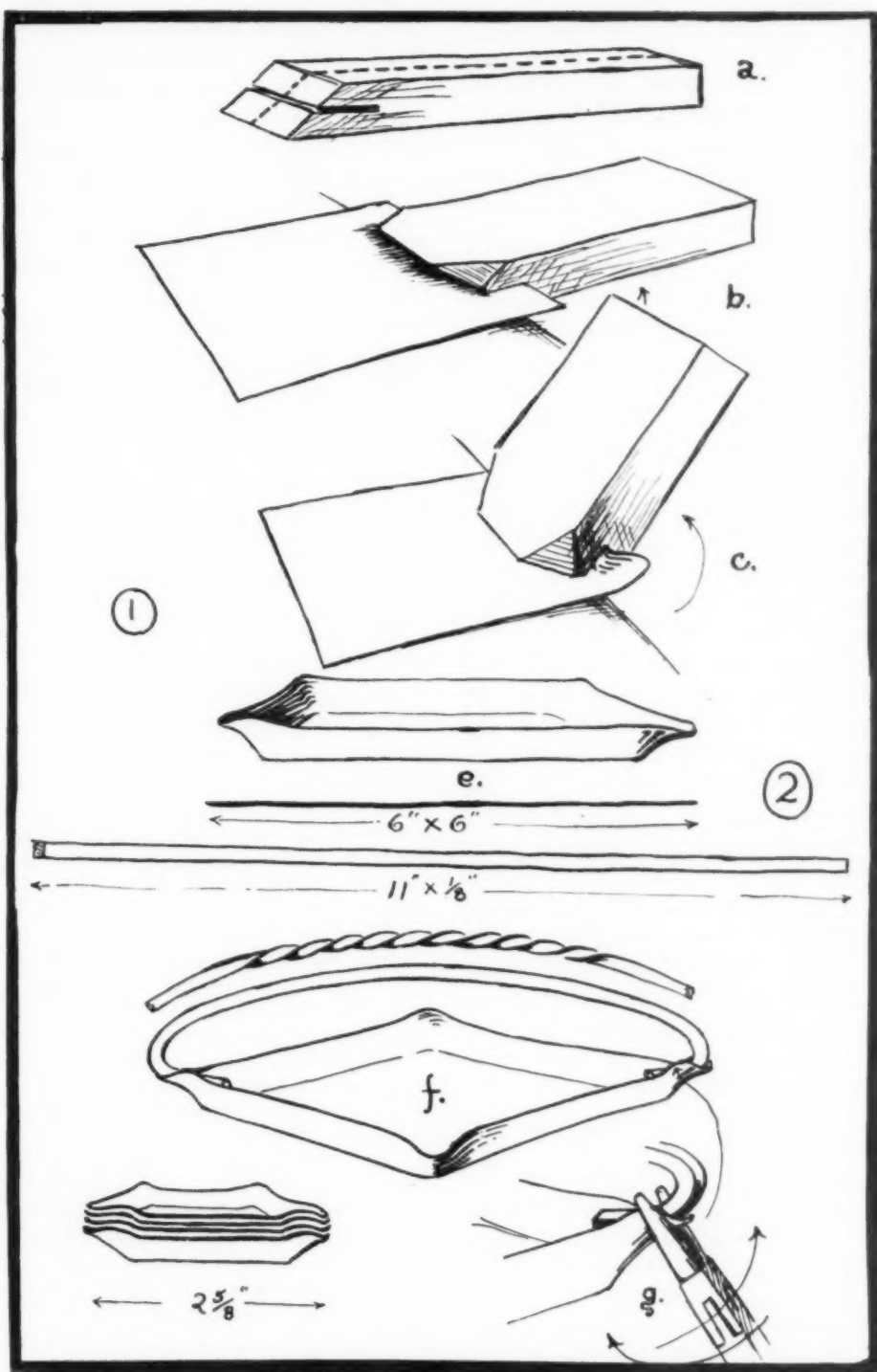
tive metal worker are just as essential to the mastery of the technique now, as when he first discovered them. The primitive workers had much experience with gold, silver, and copper, before iron was known. The copper then used was really a kind of bronze; because, as found, it contained other metals which, at first, they had no way of removing. This impure copper, with time and patience, became many things—a mirror, spearhead, knife, goblet, and even a razor for shaving.

Pounding with a heavy stone hammer eventually reduced the thickness of the ingot of metal, which, at the same time, became both wider and larger. When the first worker observed that a round-end stone hammer would reduce the thickness faster than a large, flat-faced stone hammer, he then learned the first principle. When he found that a stone hammer with a long pein, or roller-like end, not only thinned the metal faster, but made it travel either into extra width or length, according to how he placed the blows, the art of forging metal began.

The more the copper was forged or hammered, the harder it became, until it was so hard it could be sharpened on a rough stone to a cutting edge. There is no doubt that very satisfactory bronze razors were forged before the craftsmen had iron.

Present-day workers have forged them of pure copper, which never gets as hard as the impure or naturally alloyed copper the first craftsmen used. This hardening of copper, by hammering, is called tempering. The only lost art of tempering copper is the lost dexterity of the worker. It is possible today to hammer pure copper until crystalization appears, and the metal is so hard and brittle a sharp blow will break it. The pioneers next observed that fire, if allowed to heat such tempered copper to a cheery glow, removed all temper, leaving the copper soft, and permitting much further manipulation. Annealing (heating to draw the temper) added much to the technique, as it made possible almost infinite manipulation of the metal.

With forging facilitated by frequent annealing, the possibilities of the craft grew rapidly. Hammering left marks, crude dents



DIRECTIONS FOR MAKING A SQUARE CARD OR ASH TRAY. COMPLETE INSTRUCTION IS GIVEN IN THE ACCOMPANYING ARTICLE BY LOUIS J. HAAS

at first, but these hammer marks slowly became organized, as the worker acquired skill in directing each blow. Soon he learned to place each stroke, with precision, on the exact spot he desired to manipulate, with just sufficient weight to perform the work he wished to do. This organized precision eliminated the crude dents from the earlier stages of forging the metal. This also made it possible to eliminate the bold marks of hard but skillful forging, leaving in place of these the much finer facets of a finishing hammer.

These facets, the remaining evidence of skillful craftsmanship, have been accepted as surface texture which enhances, by lighting up and bringing out the natural beauty of the metal. The surface of all hand-forged metal presents these facets, except where they have been carefully eliminated by rubbing the surface with smooth stones. The stones are held in long handles that permit the use of much pressure during the rubbing, which is called burnishing. It was this burnishing which made possible the smooth surfaces of the bronze mirrors of the past. In more modern times, when desired, these facets are removed by abrasion, using files, emery cloth, and finally polishing with two or three grades of still finer abrasives. But the latter method cannot equal burnishing, when skillfully performed. In burnishing, the surface becomes more highly tempered, as it becomes smoother and more mirror-like. Such a surface has more resistance, and remains bright and smooth longer than one produced by the abrasion method.

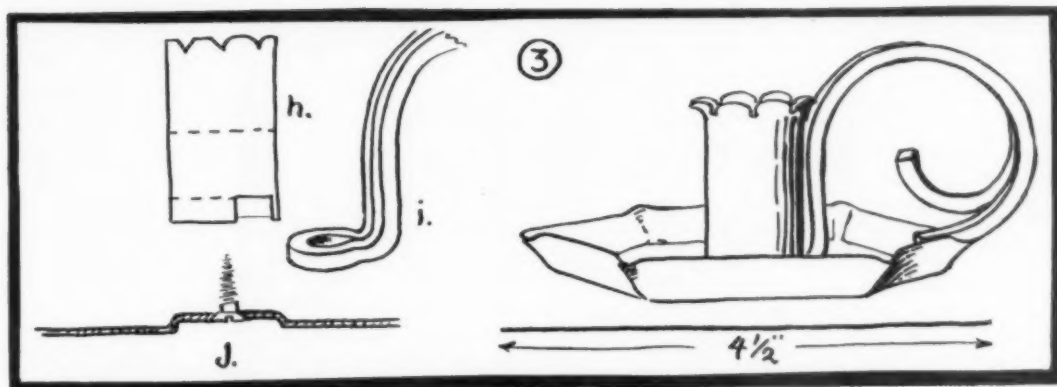
With the appreciation of the surface texture remaining after the final stage of skillful forging came recognition of the fact that objects designed for widely differing uses required more or less forging. As forging hammers were designed to meet the more specific purpose of producing certain forms, the facets composing the surface textures also varied.

With the observation that large objects of metal which were to be seen from a short distance did not require the surface texture produced by the smaller facets, surface

texture became organized. As large bold facets could be seen from a distance on large surfaces, this became the accepted texture for large objects. Things small enough to be easily handled felt more comfortable if the surface texture was composed of small, rather flat facets, and these could be seen plainly enough at short distances. Between these two extremes, various gradations of surface texture were accepted as best suited to the use and purpose of the object, and to enhance the natural beauty of the metal. This organized use of surface texture is now called planishing. Planishing tempers the metal, while producing a pleasing surface texture. It is now used to thus condition sheets of metal that will require no other forging to produce the designed object, as well as the final stage in forging the object of metal.

The projects here presented are designed to demonstrate the use of these basic principles, in a constructive manner. All are practical for the craftsman who is limited to the few simple tools the home workshop affords.

Those required are a pair of tinsmith's shears, with two and one-half inch jaws; a ball pein hammer, five-eighths of an inch in diameter, weight about five or six ounces, including handle; a pair of pliers with jaws about one-quarter of an inch wide, one jaw flat and the other slightly rounded; a pair of round-nose pliers; a file for metal, preferably the type called flat, smooth cut, length six inches; a smooth-surfaced iron or steel block for planishing, about four by four by one and one-half inches. The planishing block should be attached to the table, so that it will not move while work is in progress. An inexpensive substitute for this planishing block, and one that is just as serviceable, is the old-fashioned flatiron, or sadiron, if the face is quite smooth and not pitted with rust. The type with detachable handle is easily used. The type with fixed handle need only be supported face up between two blocks of wood joined with a large screw passing through the handle space. Two small bench vises with one and one-half inch or two-inch jaws, the type some stores sell for about a dollar, are quite satisfactory. A center punch, one-eighth inch, three-sixteenths inch, and one-quarter inch twist drills and hand drill, screwdriver and a few three-quarter inch and one inch number five oval head brass screws will be needed. The material is cold rolled copper and soft or half hard brass, number twenty-



AN INTERESTING CANDLESTICK THAT CAN BE EASILY MADE IF YOU FOLLOW THE DIRECTIONS GIVEN BY MR. HAAS IN HIS ARTICLE, "ART METAL WORK"

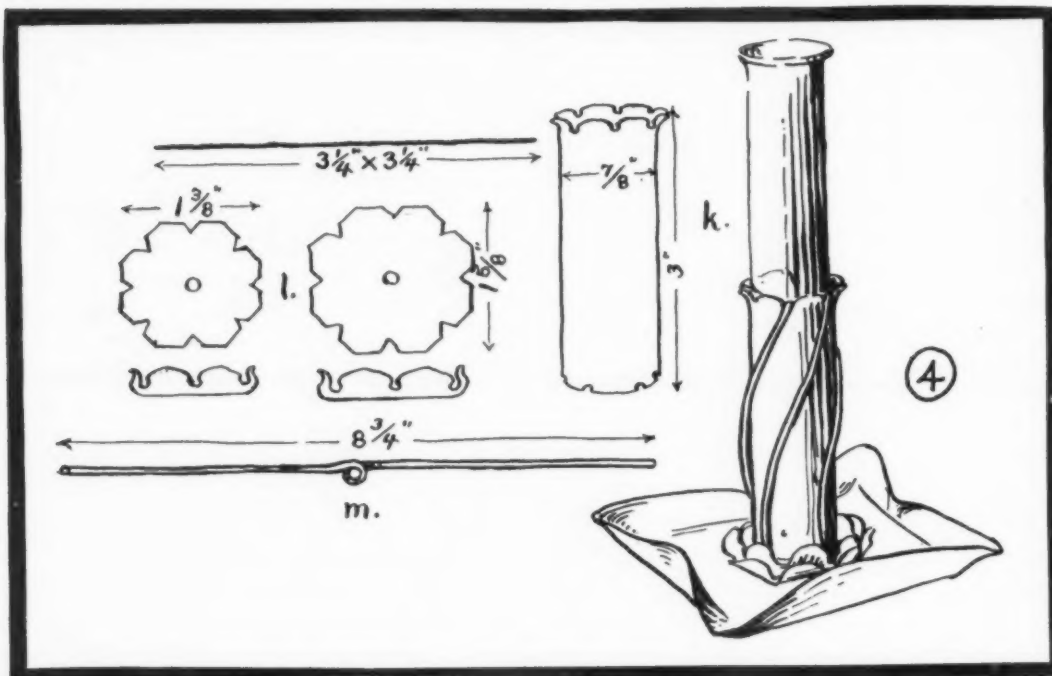
four gauge. The same projects could also be made in number twenty or number twenty-two gauge aluminum. Other materials, etc., will be listed as each project is explained.

PROBLEM NO. 1. A square card, or ash tray, is made of a six-inch square of copper. (See drawing "e," Plate 2.) Take a piece, about one-quarter inch larger than required, and planish to produce a surface texture. The planishing is accomplished thus: Have the planishing block fixed to the table. Sit in front of it so that with elbow against side, and striking from the wrist, the ball end of the planishing hammer drops on the center of the block. Having established the proper striking position, maintain it, so that the hammer always falls on the same spot. The hammer is heavy enough to do its work if raised about two and one-half inches and let drop. A rhythmic motion should be used, allowing the falling hammer to rebound, adding just enough energy to raise it to height for the next drop.

With the hammer falling with measured beat, as if in a groove, upon one spot, learn to move the metal under the hammer. Start planishing at one corner, and follow along one side, making each hammer mark touch the preceding one. When the first row of planishing is completed, start the second directly beneath, having the hammer marks of the second row contact those of the first. Proceed thus until the whole piece of metal has been planished. Note the planishing is always done in orderly rows, never hit or miss. If not planished orderly, the metal will be buckled or warped, and gaps in planishing are very difficult to correct. The metal will curl up as the planishing proceeds. It may be flattened with the mallet from time to time. Disks of metal are usually planished from the center, in concentric circles. Sometimes, if the weight of blows has varied, the planished metal will not flatten out under the mallet. When this occurs, decide where the tension zones are, and relieve the tension in the following manner:

If a portion of the metal is domed, and will snap back and forth like a tick-tack when pressed, this means it has been planished harder than the surrounding areas. Scatter a few planishing marks over the surrounding areas, grading in number, a few near the domed portion and more further away from it. Scatter means just that; it is better to underdo than overdo this treatment. Use the mallet frequently to ascertain if tension has been released. If edges of the metal are ruffled, the planishing has been heavier here than in the center. Scattered planishing blows, grading from many at center to few as the ruffled surface is approached, will correct this. Be conservative and use the mallet frequently, to ascertain what has been accomplished. Should a corner curl up and refuse to flatten out under the mallet, two forms of tension may be the cause. If edges forming the corner have been more heavily planished than the interior, a few planish marks scattered along the diagonal, through this section, will permit the corner to drop. The edges forming the corner may appear as tight cords holding it up. A few scattered planish marks along these edges, and becoming more scattered a little way in from the edges, will stretch them enough to permit the corner to drop. Remember, if overdone, the opposite tension will develop. Therefore, always apply treatment sparingly, and use the mallet frequently to demonstrate what has been accomplished. Certain shapes of planishing hammers produce more uneven tension than others. Experience and skill make for evenly planished metal, but every worker must know how to locate and release tensions due to variations in planishing. Always release tension with the hammer used in planishing.

When planishing is complete, trim to six by six inches, with all four corners rounded to one-half-inch arcs. File each edge in rotation, just enough to remove burr. Finally, use a small piece of emery cloth, to finish rounding the edge of the metal, taking care not to touch the top or bottom face of



WORKING DRAWINGS FOR TEST-TUBE BUD VASE DESCRIBED IN THE ACCOMPANYING ARTICLE

the metal with the emery. The metal is now ready to shape.

The shaping is accomplished with a pair of shaping sticks. The worker could have a set, of two each, of the following widths of shaping sticks—one inch, one and one-half inch, two inches, three inches, and five inches. To make the one-inch shaping sticks, take a piece of maple or oak, one inch thick, six inches long, with the grain, and two inches wide. In cutting this piece to a six-inch length, cut one end square, the other end square across the width, but at an angle of sixty degrees to this face, down through the one-inch thickness of the board. Across the sloping end of the board, and parallel to its two-inch faces, saw to a depth of one-half inch down through the middle of the one-inch thickness of wood. Be careful to saw to an even depth. Now divide the two-inch piece into two pieces, one inch by one inch by six inches, by sawing through the middle, as indicated by the dotted line. (See drawing "a," Plate 1.) All other widths of shaping sticks are constructed as just described. The pair of sticks should be made in one piece, and separated when completed, to assure uniformity.

Place the planished and trimmed piece of metal on the table, face up, with one edge extending about one-half inch beyond the table. Slip the shaping stick in place, with the longest face up. (See drawing "b," Plate 1.) Holding the stick so that it may not slip away from the metal, and without permitting

the metal to move on the table, raise the stick up until the sloping end is tight against the surface of the metal. (See drawing "c," Plate 1.) Leave this stick in place and turn metal, so that the next edge is extending beyond the table enough to place the second shaping stick. Holding the metal and first shaping stick firmly in position, raise second shaping stick up, until the sloping surface of it touches metal.

NOTE: In placing the five-inch width shaping sticks used in making this tray, they should be placed mid-way between ends of the six-inch side of the square of metal. As the inner corners of the sticks will conflict when both sticks are raised, bevel these off. (See drawing "b," Plate 1.) The first shaping stick may now be removed; the metal turned so that the third side is in position, and this stick slipped in place and raised to the shaping angle. When the fourth side has been shaped, it may be found necessary to use the shaping stick on the first side again, leaving the stick on the fourth side, while reforming slightly the initial corner.

For the SECOND PROBLEM, a handle may be added to this tray, adding a new decorative note, enhancing its usefulness. Take an eleven-inch piece of one-eighth-inch square copper or brass bar, and curve slightly from end to end. Now curve the ends around in a three-quarter-inch arc, so that they point towards each other, and slightly downward. The handle, as now shaped, will measure across the

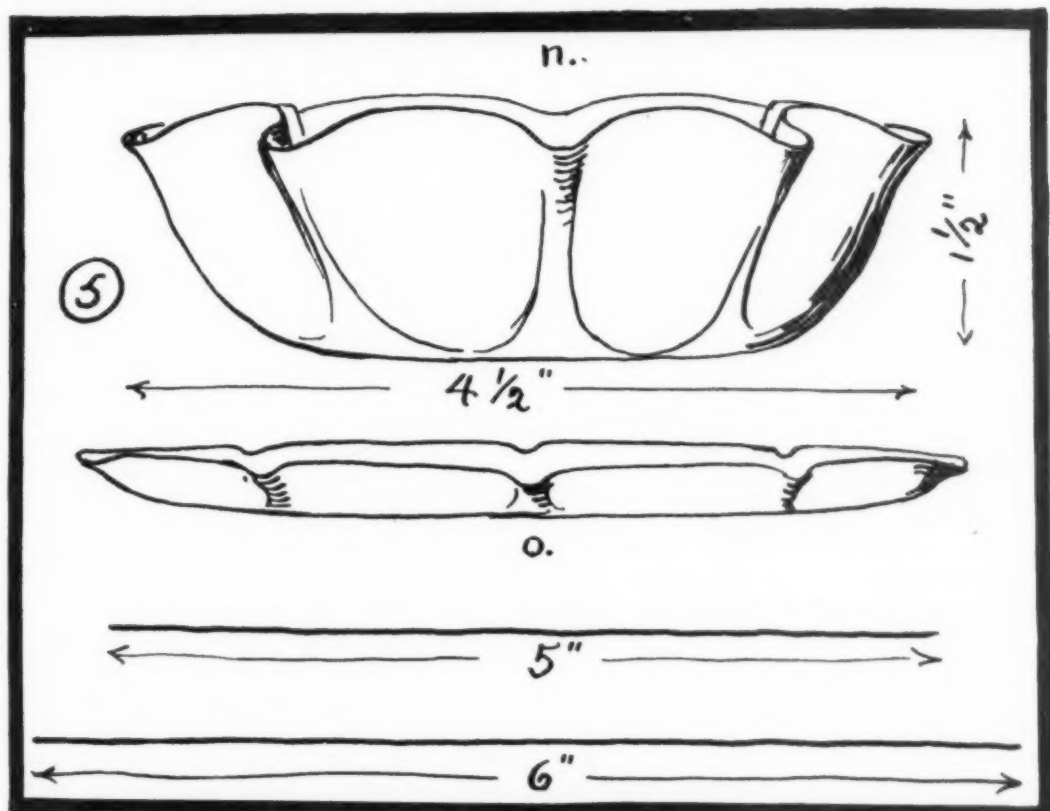
arcs just eight inches, and between ends of the bar six and three-quarter inches. With the pliers, force sides of the tray inward, at a point three-eighths of an inch from one corner, until they are hardly one-eighth inch apart at this point. Do the same at the diagonally opposite corner. Now slip the handle ends down into the pockets thus formed, and close the sides inward over the ends with the pliers. This will hold the handle firmly in an upright position. (See drawing "g," Plate 2.)

The handle can be made more attractive, as follows: Cut a one-eighth-inch square bar, eleven and one-half inches long. Place one end in vise attached to table, so that just eight and one-half inches of the bar extends beyond the end of vise. Now fasten a second vise to the bar, at a point five inches from the table vise. Turn the second vise one or two complete revolutions, twisting the bar. If the vise is placed with the screw head up, one revolution will be complete when it returns to this position again. If the bar seems springy, turn a little beyond this point, so that plain ends will be in alignment when removed from vise jaws. (See drawing "f," Plate 2.) The twisting will take up

the extra half-inch of length. The bar is now shaped as first described. This handled tray makes an attractive card, or bon-bon tray; or it may be used to hold four small ash trays. These individual ash trays are shaped from two and five-eighth-inch squares of planished metal, with corners rounded to three-eighth-inch arcs. The one and one-half-inch shaping sticks are used, in manner described for the larger tray. Attractive variations on this tray, and small individual ash trays, could be planned on an equilateral triangle, or a hexagon for the large tray. In each, the individuals would be triangles. The hexagon tray could have a handle, like the square tray.

PROBLEM No. 3, the candlestick, is a hexagon tray, planned within a four and one-half-inch circle, with corners rounded to an arc of one-half inch. (See Plate 3.) The metal is planished, trimmed, and shaped, as described in Problem No. 1. Brass or copper tubing, seven-eighths of an inch in diameter, made of No. 22 or No. 24 gauge metal, may be procured. Cut a piece, one and one-half inches long, with the saw. Use a fine-toothed hack-saw blade.

Have a dowel or old broom handle that will go



METAL ENTHUSIASTS WILL ENJOY MAKING THIS FINGERBOWL OF PLANISHED METAL. LOUIS J. HAAS, DIRECTOR, MEN'S THERAPEUTIC OCCUPATION, BLOOMINGDALE HOSPITAL, WHITE PLAINS, NEW YORK

into the tube, if driven. It must fit tight. Cut a piece just five-eighths of an inch long, and drive the maple plug in, until it is three-sixteenths of an inch below this end of the tube. Now file an opening one-quarter of an inch wide into the edge of the tube at this end, continuing until the wood plug is reached. This is to receive the handle. Divide other end of the tube into six parts, by filing triangular notches, three-sixteenths of an inch deep, into the edge. Round outer edges of these notches. The six tabs, formed by notching, are now rounded outward with the pliers. (See drawing "h," Plate 3.)

Place upright in the vise a piece of water pipe, the smooth filed end of which measures seven-eighths of an inch or one inch on the inside, after burred edge has been reamed or filed off. Center the tray bottom up over the pipe and hold firmly, while dapping a flat dome within supporting pipe, with the ball pein hammer. Place the tray face up upon the table, and flatten the top of the dome with a few light blows of the flat face of the hammer. What remains of the dome will be a flat raised section of metal, about one inch in diameter and raised one-sixteenth of an inch or less above the floor of the tray. Through the center of this raised portion, drill a one-eighth inch hole. From the under side, cut away the edge of this hole by a turn or two of the one-quarter-inch drill, thus countersinking to receive the head of the screw. This, and the clearance produced by the doming, make it impossible for the head of the screw to touch the table. (See drawing "j," Plate 3.)

The handle is made from a piece of one-eighth-inch square or round bar, cut fourteen inches long. Bend at the center until the two halves touch and parallel each other. Place a three-sixteenths-inch diameter rod through the loop, and close the two halves, as near to this point as possible in the vise.

Place the looped end in the vise and bend both of the parallel ends of the bar down to form a right angle at a point three-quarters of an inch from loop end. (See drawing "i," Plate 3.) Round the paired ends of the bar, from about one-half inch from this angle to the very end. This should make an uncompleted circle, the ends not reaching the angle by about three-quarters of an inch. Leave one end in this shape; but, with the pliers, curve the other end round and up, so that this end is one-half inch higher than the first.

Before starting to assemble, drill a hole, a little smaller than the thread part of the screw to be used, into the dowel plugging the tube. Place screw through hole in tray from under side, place loop of handle over screw, put tube in place and tighten up the screw with screwdriver. As the screw is tightened, adjust handle, so that the first end rests in one of the corners of the tray. Finally, with pliers, this corner can be closed up around the end of the handle, holding it firmly in place. The candlestick can be made in all copper, brass or aluminum; or it may be made of combinations of any two of these.

PROBLEM No. 4, the test-tube bud vase, has a base made from a piece of planished metal, three and one-quarter inches by three and one-quarter inches, with corners rounded off to three-eighths-inch arcs. Raise side with the two-inch shaping sticks. When this is completed, take hold of the raised side at the middle, with the pliers, and roll the metal in towards the center. This is done in turn to all four sides. This changes the contour from a simple square, to the suggestion of a four-pointed star. The best plier to use for this has one flat jaw, about one-quarter of an inch wide, and the other jaw slightly rounded. Dap up a slight elevation to clear screw head, as described for the candlestick, and drill. Cut a piece of seven-eighths-inch tubing, three inches long.

Planish the tube on a round bar of iron which may be held in the vise. Plug one end, as described for candlestick. Tube may be center-punched at four points, to prevent plug from slipping. Divide the edge of upper end of tube into eight tabs, and round outward with the pliers. (See drawing "k," Plate 4.) Cut an octagonal piece of planished metal out of a one and three-eighths-inch square, and another out of a one and five-eighths-inch square. Divide each side of these octagons at the middle with a triangular notch, which may round off into the surface it divides. This changes the plain octagonal contour into an eight-petaled form. Roll these petals slightly upward with the pliers. (See drawing "l," Plate 4.) Take two pieces of No. 18 gauge wire, about eight and three-quarters inches long, and form an eye at the middle, by bending around three-sixteenths of an inch, rod having arms of wire in continuous line, after eye is formed. (See drawing "m," Plate 4.) Notch the edge of the plugged end of the tube, at four equally spaced places, just deep enough to clear the wires just prepared. Assemble, by placing screw up from under side of the tray; place large and then small rosettes upon it. Next, place eyes of the two wires over screw, and finally the plugged end of the tube.

In tightening the screw, adjust the wires one to each notch, and arrange the rosettes, so that outer and inner petals are either centered or intersect each other. When assembly is quite tight, the wires are disposed of in several ways: each may be taken to the notch directly above, pulled quite tight, and hooked over the edge through the notch, and cut to a notch three, four, or even five in advance of the one just mentioned, hooked tightly in place, and the hook trimmed as short as will hold. Another arrangement would have four secondary notches at the bottom, with four extra wire ends brought through.

These could protrude beyond the tube base but one inch or one and one-half inches, and be curled up in a small spiral curve that is pressed flat against the tube. One such spiral is placed between each of the four divisions formed by the longer wires. All

(Continued on page 640)

SLIP POLISHED AND SLIP PAINTED POTTERY

NORMA L. DIDDEL

Peru State Teachers College, Peru, Nebraska

AN interesting gloss for bisque fired pottery may be obtained by using a method similar to that followed by some of the Pueblo Indians, particularly the Santa Clara and the San Ildefonso groups.

The shiny effect is the result of rubbing the surface with some hard smooth object after first coating the damp pottery with thin clay slip. It is not practical to follow the exact process used by the Indians but an adaptation of their methods can be used easily in art classes.

Coil method pieces, or thrown pieces if of thick walls, may be polished. Cast ware is too fragile. The pottery is let dry to the "leather hard" stage. It is smoothed as much as possible by using a modeling tool or a strip of cardboard to scrape the surface until no uneven spots remain. Slip is prepared by mixing clay with enough water to make it the consistency of cream. This creamy slip is applied with a bit of rag or a paint brush. When the wet look has disappeared, the polishing is begun. This may be from two to ten minutes after the slip has been brushed over the jar. A very smooth small stone, a piece of metal or a piece of bone have all been used, but the back of the bowl of a teaspoon has proved the most convenient.

The polisher is rubbed over and over the damp slip covered bowl until a gloss appears. The rubbing is continued until the surface is uniformly smooth and no more polish results from the rubbing. As the surface becomes more dry, less gloss is added by continued polishing. A fair degree of pressure is needed on the spoon or other tool used for the polishing.

School Arts, June 1937

The gloss is quite effective after the first or the bisque firing in a regular pottery kiln. The polished surface should not be glazed but if waterproof piece is desired the inside may be coated with glaze and the piece fired a second time.

Slip polished pieces have been made of native Peru clay which fires a light red color, as well as of regular buff firing pottery clay purchased from a pottery supply house. Such slip polished ware may be fired in a bonfire as is done by some of the Southwest Indians, if it is made of clay which has a low firing temperature.

COLORED SLIP PAINTED POTTERY

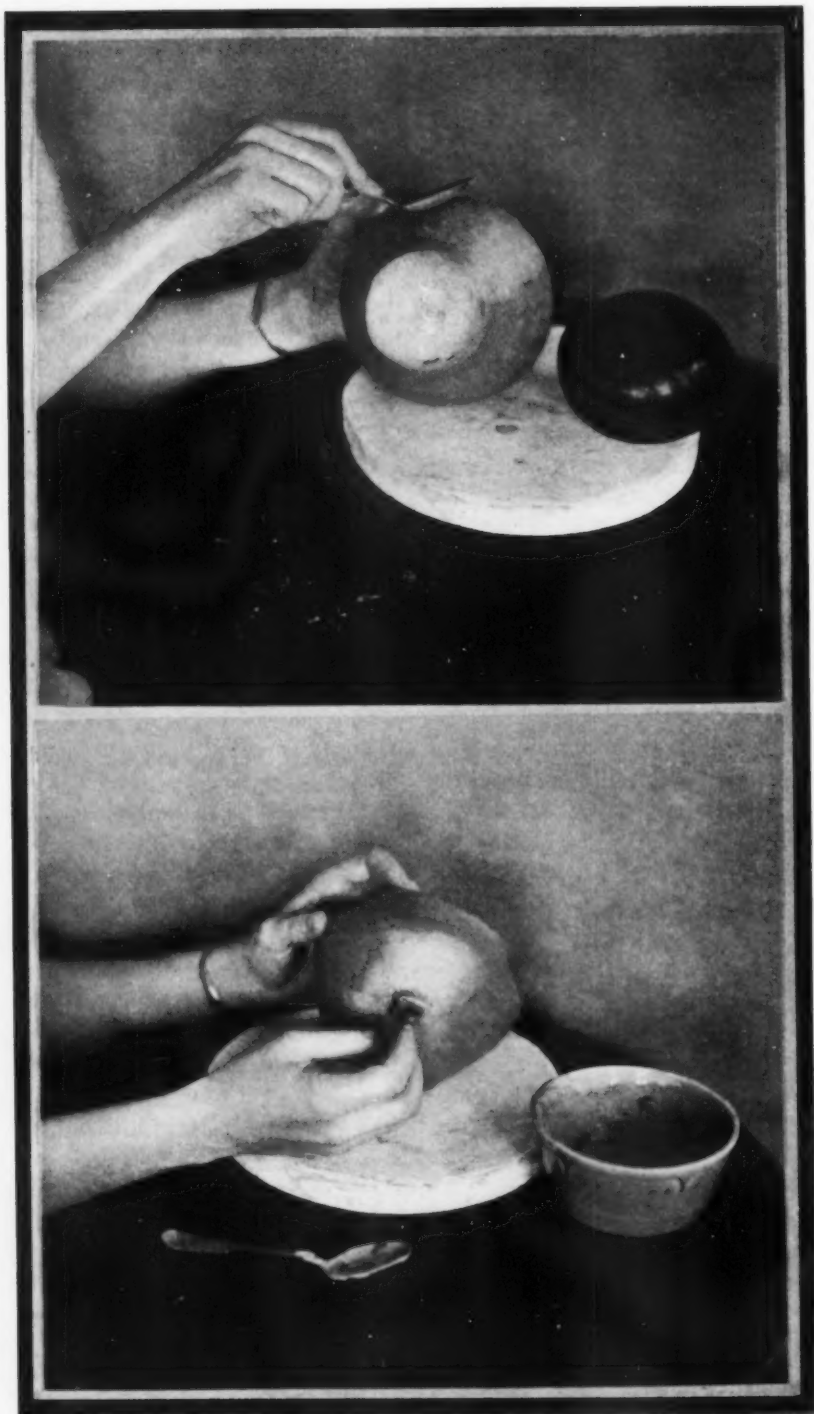
Effective designs can be applied to pottery with slip of clay a different color from the pottery body. Designs of the type found on some American Indian, on Mexican, and on Greek pottery may be used. The pottery of cream colored clay may have red and black clay slip painted decoration, pottery of red clay may have cream and black designs.

When pieces made by the coil method or pieces with thick walls made on the potter's wheel are hardened slightly, not quite to the "leather-hard" stage, designs may be painted on with an ordinary paint brush dipped in thin clay slip of the desired color.

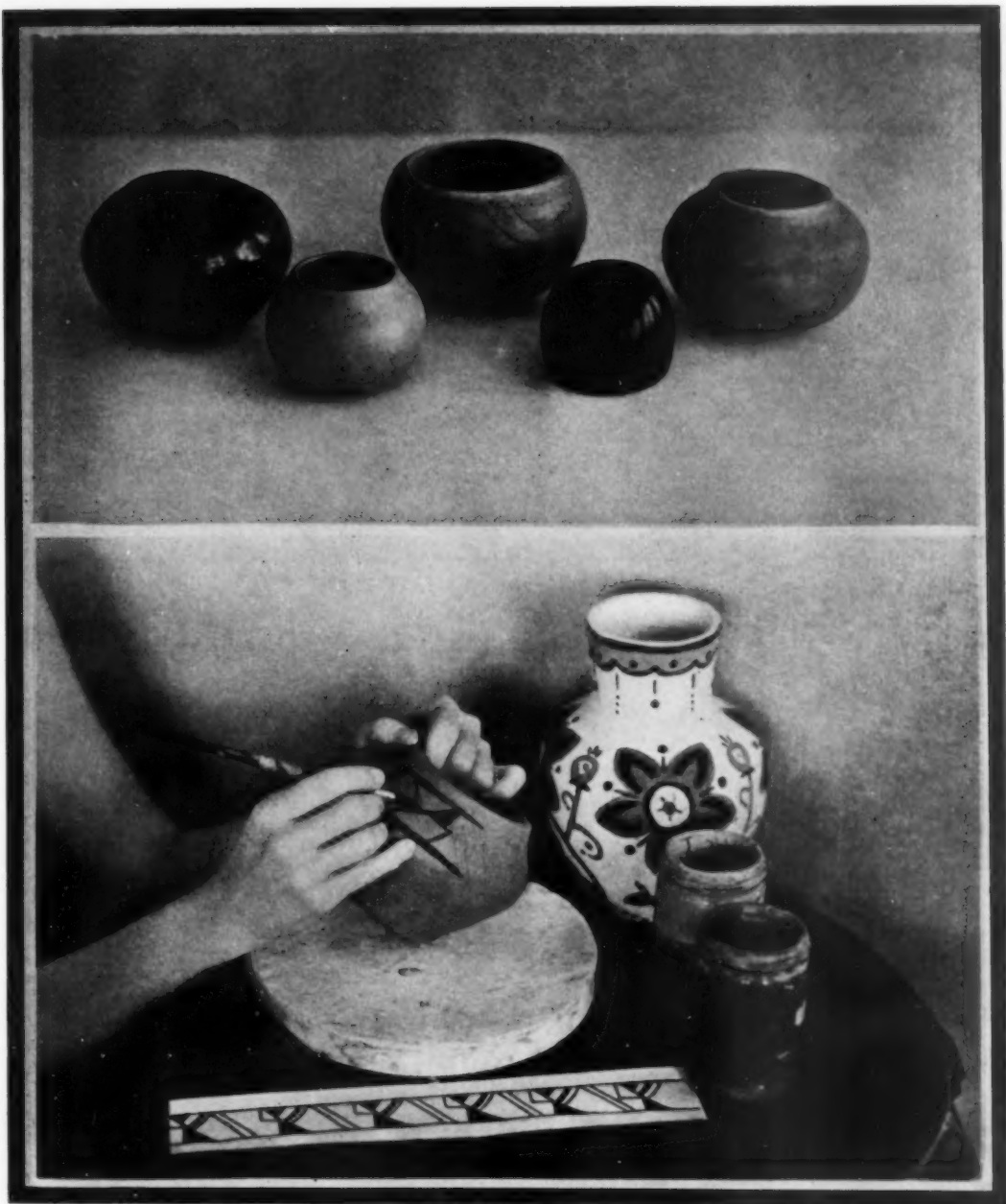
The piece of pottery must be as smooth as possible and soft enough for the slip to adhere well. Slip painted ware cannot be handled much, for fingerprints will be left if it is too soft and the design may chip off if it is too dry.

After drying, the design is not so obvious as at the time it is being applied, for the red, buff and black firing clays do not vary much in color. Following the bisque firing, the colors are in sharp contrast. Even during the firing the designs show quite well when the glowing hot ware is seen through the peep hole of the kiln.

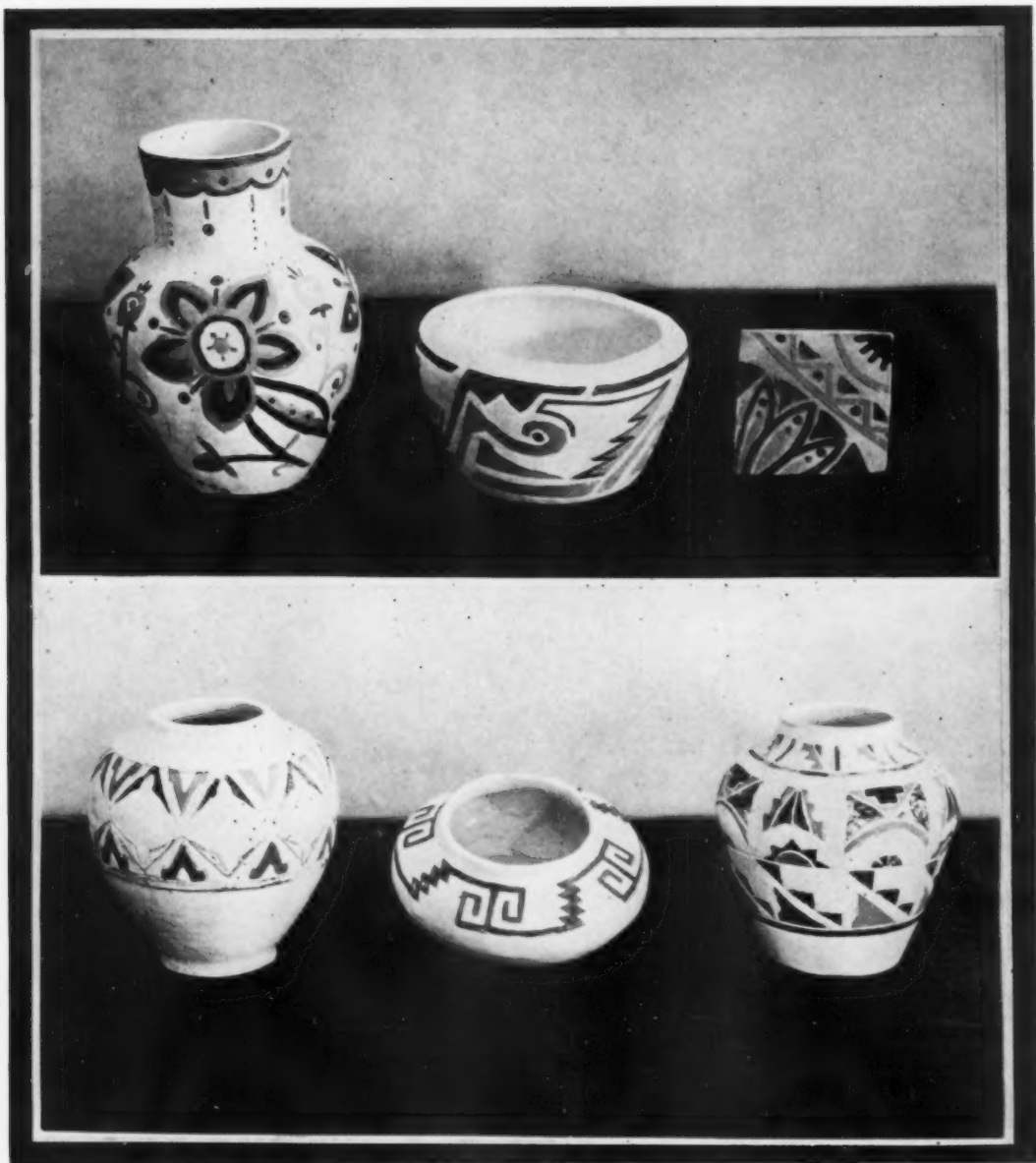
Slip decorated pottery may be given a second firing with a coat of transparent glaze if a waterproof piece is required. Glaze may be used inside and the outside left unglazed if a dull finish is preferred.



BELOW: SLIP APPLIED WITH A BIT OF RAG TO THE PARTLY DRIED "LEATHER-HARD" POTTERY.
 ABOVE: POLISHING SLIP COVERED POTTERY WITH BACK OF BOWL OF A SPOON. A FIRED PIECE
 AT THE RIGHT



ABOVE: SLIP POLISHED POTTERY MADE OF NATIVE PERU CLAY. DESIGNS SCRATCHED THROUGH THE POLISH BEFORE THE BISQUE FIRING IN REGULAR POTTERY KILN ON TWO OF THE LIGHT (RED) PIECES. DARK PIECES WERE FIRED IN A BONFIRE AND ARE BLACKENED BY SMOKE. BELOW: PAINTING WITH RED AND BLACK CLAY SLIP ON BUFF FIRING CLAY BOWL WHILE IT IS STILL VERY DAMP. JARS OF BLACK AND RED CLAY SLIP AND A FINISHED BISQUE FIRED PIECE AT RIGHT



ABOVE: SLIP DECORATED POTTERY AFTER FIRST OR BISQUE FIRING. IN THESE PIECES THE PAINTING WAS DONE FREE-HAND DIRECTLY ON THE DAMP POTTERY. BELOW: SLIP DECORATED POTTERY AFTER A SECOND FIRING WITH TRANSPARENT GLAZE. IN THESE PIECES INCISED OUTLINES WERE USED

Some students are able to paint designs free-hand, directly on the pottery, building up the design as they work. They use brush strokes which are straight, curved, zig-zag, scalloped, half circles, dots, or S-shaped lines. A few students prefer to make a careful drawing on thin paper of the exact size to fit the vase. They lay this paper on the wet clay vase and trace over the lines with a sharp modeling tool or a blunt pencil. When

the paper is removed a faintly indented outline shows in the wet clay. The parts of the design are painted with colored clay slip and the lines obliterated either by covering with slip or by smoothing them away with the fingertip or a modeling tool. The lines may be slightly incised with a modeling tool to form a definite outline around parts of the design, if it is one such an outline will make more effective.

A MODERN WASTEBASKET

STELLA W. WIDER

Assistant Supervisor of Art

Lynchburg, Virginia

(See "Open-up Section")

A WASTEBASKET can be a wastebasket, just another "piece of gingerbread," or it can be a satisfying accessory to any room. Somehow it seemed as if most such baskets were leaning a bit too much toward the "gingerbread." The seventh year pupils got busy with some rather different ideas in craftsmanship, from which were evolved some very artistic results. While few of the baskets were alike in shape, size, or materials used, the following description will enable anyone to produce a basket which may be as original and as harmonious as he will.

After all, no matter how pleasing to the eye a thing may be, it must fill a need, and be in harmony with its surroundings in order to be worth while. With these thoughts in mind, pupils were urged to study carefully the color scheme, and the type of decoration in which each particular basket was to find its resting place.

MATERIALS REQUIRED:

Two pieces medium weight strawboard

School Arts, June 1937

nine and one-half by twelve and one-half inches.

Two pieces medium weight strawboard six and one-half by ten inches.

One piece medium weight strawboard six and one-half by nine and one-half inches.

Six sheets of nine by twelve-inch art paper, or its equivalent—for linings.

Three-quarters of a yard of cloth of coarse weave, heavy paper, lightweight oilcloth, or unbleached muslin, for the outside of the basket.

Wax crayons, paste, thread.

Tools.

A nice pile of old newspapers.

A large brush for pasting.

An old flatiron for smoothing.

Needle for overhanding the pieces together.

(Cast off flatirons are extremely useful in the equipment of any art classroom. Teachers who ask their pupils to procure such, will be surprised at the number of donations received. Housekeepers seem glad to be rid of them.)

PROCEDURE

STEP I. Cut the necessary five pieces of cloth at least three-fourths of an inch larger on all sides than is the cardboard it is to cover. It is best to pull the threads when preparing the cloth for the sides and base. This forms a good lesson in painstaking, and insures accuracy. It was discovered that boys like to pull threads, probably because they like the positive results.

Cut the lining papers at least one-eighth less on all sides than is the board which each paper is to cover.

STEP II. Divide the waste papers into two piles. Place one piece of cloth on one pile. Place the corresponding piece of board to be covered on the other pile of waste papers. Cover the board evenly with paste. Then place the board, paste side downward, on the center of the piece of cloth. Take the cold iron and press the board firmly into place on the cloth.

STEP III. Put about an inch margin of paste all around the exposed side of the cardboard. Allow a little to get on the thin edges of the board.

STEP IV. *Pull on the underlying waste paper*, and thus pull the cloth over the pasted edges of the board. While holding the cloth in position thus with the waste paper, it is a good plan to run the finger, or the straight edge of the iron against the edge of the board, so that the cloth may adhere to the board. *Never touch the cloth with the fingers once the pasting has begun.* Now press the lap over cloth edges into place with the cold iron. Do this while the cloth is still covered with the waste paper.

Cover all the boards in the same manner. Do not cut out the corners of the cloth, as you might in making a book cover, but be sure that the corners are smooth and straight from the right side. If you feel that you must lift the board to be sure of this point, be sure to remove the waste paper underneath it, so as to insure a clean resting place when the board is placed down again.

STEP V. Paste the corresponding piece of lining paper. Place it on the exact center of the board so that all the overlapping cloth may be held neatly in place thereby.

(The nine by twelve paper is not quite large enough to line the two larger pieces of board. A simple band of contrasting color at the top makes a pleasing addition, and keeps the edges even.)

Once having placed the lining paper in place, lay a piece of clean waste over it, and press with the cold iron. Press carefully, so that the paper may not slip out of place.

STEP VI. Put to press at once, between several pieces of clean waste paper, to prevent warping, and to absorb the moisture from the paste. It is a good thing to change these papers several times during the several days that the work is left to press.

STEP VII. When the pasting is thoroughly dry, apply the design, previously prepared, with wax crayons. Lay a clean piece of waste paper over the crayoned part, and press with a moderately hot iron. This takes away the waxy look, and prevents smearing.

STEP VIII. Overhand the cardboards together with fairly strong thread, and with a moderately loose stitch. Just catching the threads of the cloth is quite enough for durability. It is unnecessary to sew into the board.

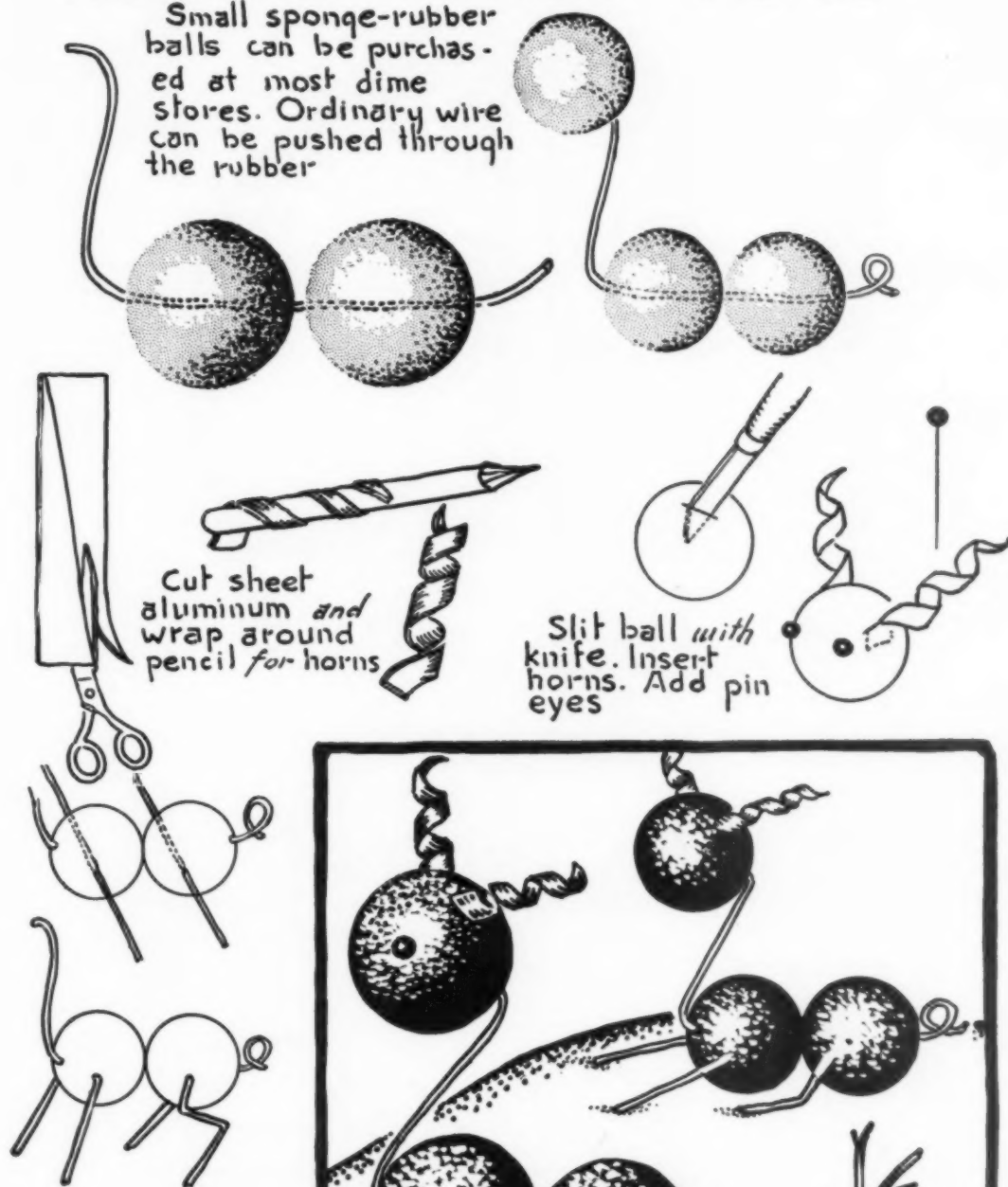
Many of the designs used were interesting adaptations from the SCHOOL ARTS. Others were original.

In like manner, some members of the class made small mantel screens, while others made screens for the telephone table.

RUBBER BALL TOYS

Small sponge-rubber balls can be purchased at most dime stores. Ordinary wire can be pushed through the rubber

Figure
sponge
funnel
a pair
lotion

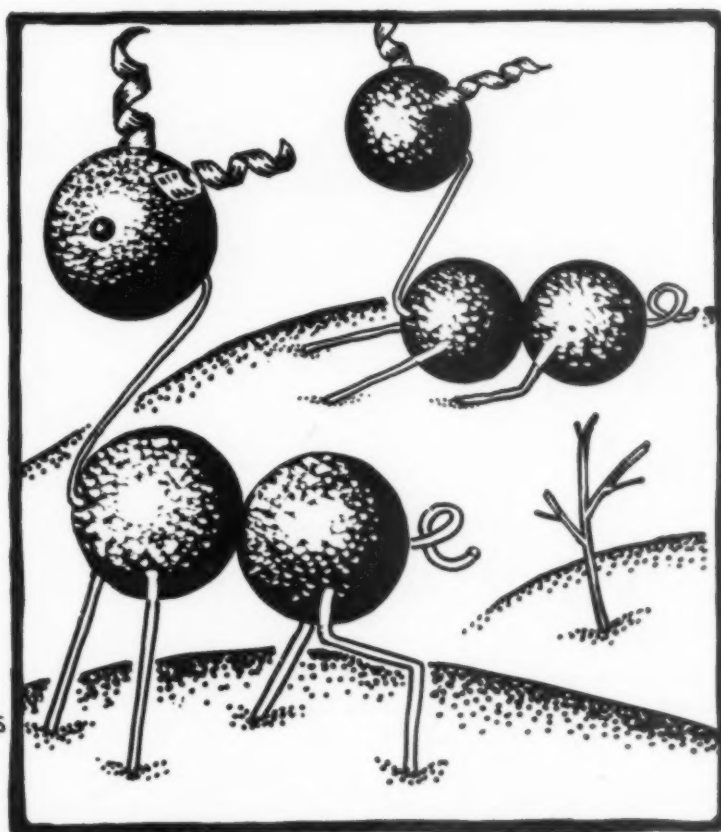


Cut sheet aluminum and wrap around pencil for horns

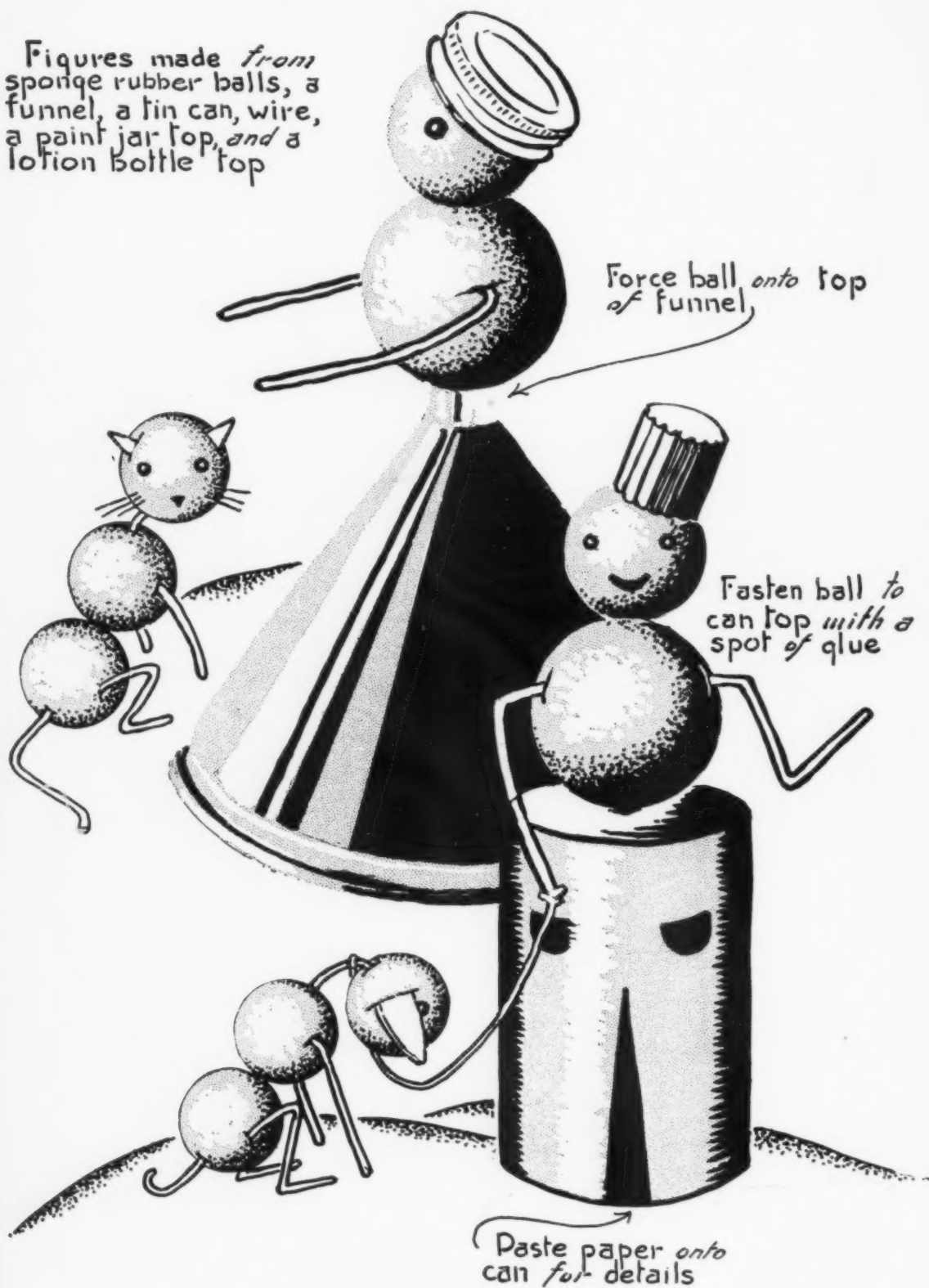
Slit ball with knife. Insert horns. Add pin eyes

For legs stick wires through balls and bend down

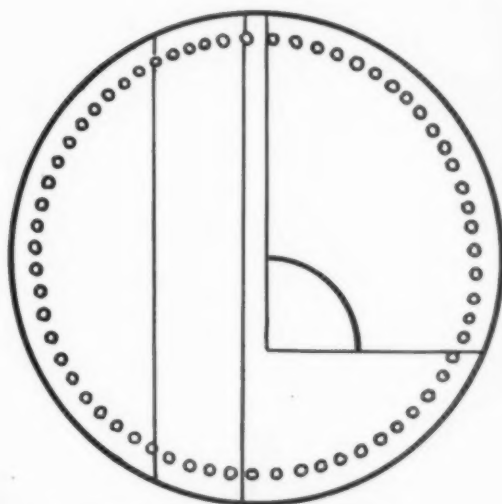
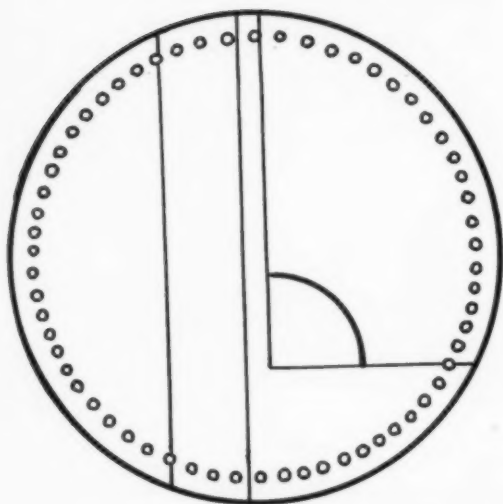
To make different types of animals change ears and tail. Use for table projects



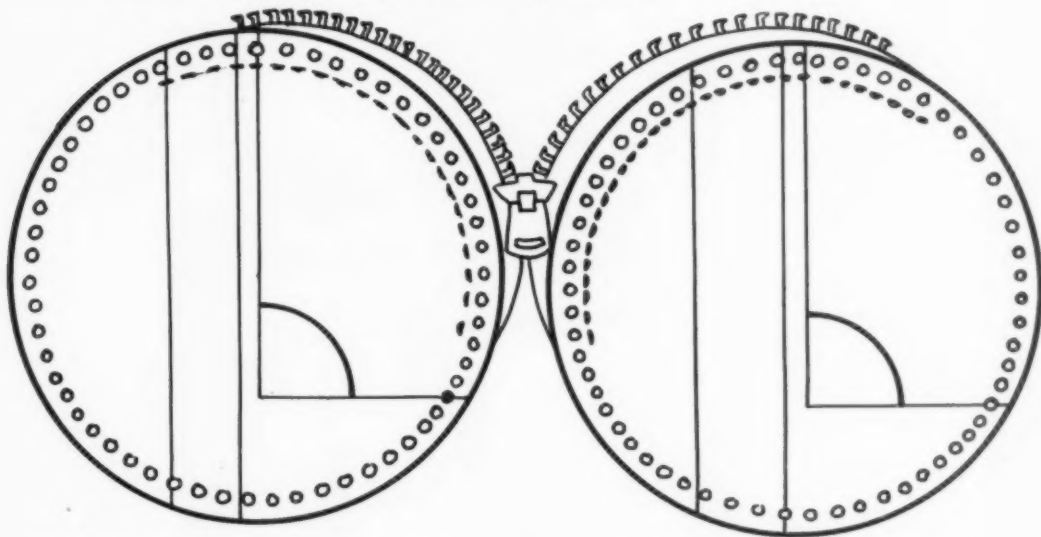
Figures made from
sponge rubber balls, a
funnel, a tin can, wire,
a paint jar top, and a
lotion bottle top



A ROUND ZIPPER PURSE



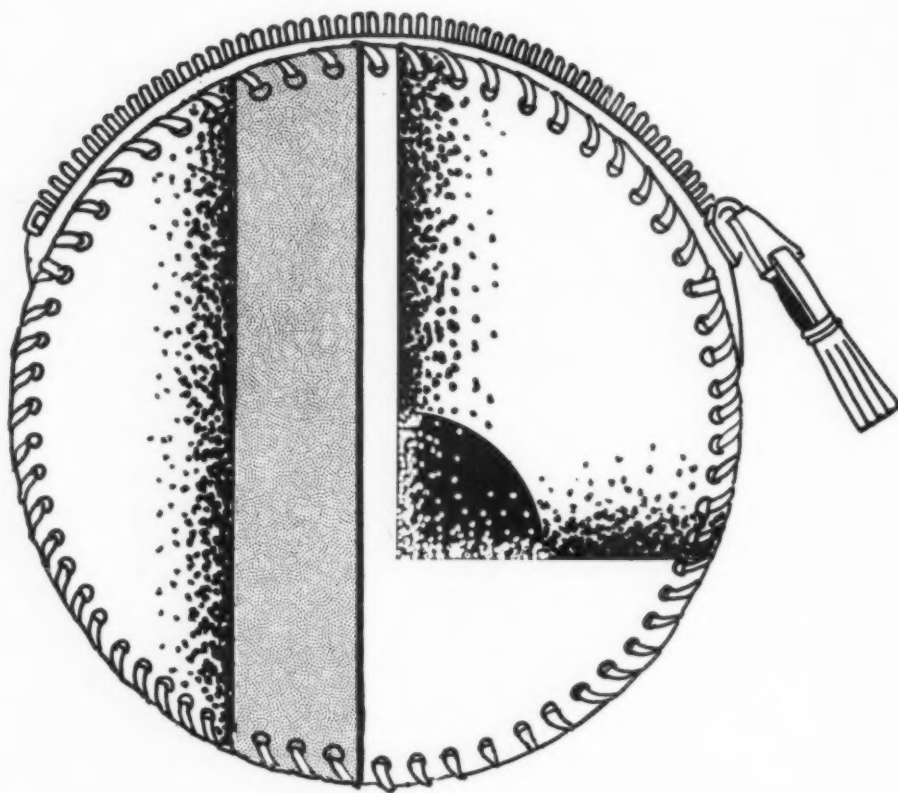
CUT TWO CIRCULAR PIECES OF LEATHER ABOUT $5\frac{1}{2}$ " IN DIAMETER. TOOL DESIGN AND WITH A COMPASS MARK A LINE ABOUT $\frac{3}{16}$ " IN FROM THE EDGE AND PUNCH HOLES $\frac{3}{16}$ " APART ON THIS LINE. MARK THE SECOND PIECE FROM THE FIRST SO AS TO HAVE HOLES PRECISELY THE SAME.



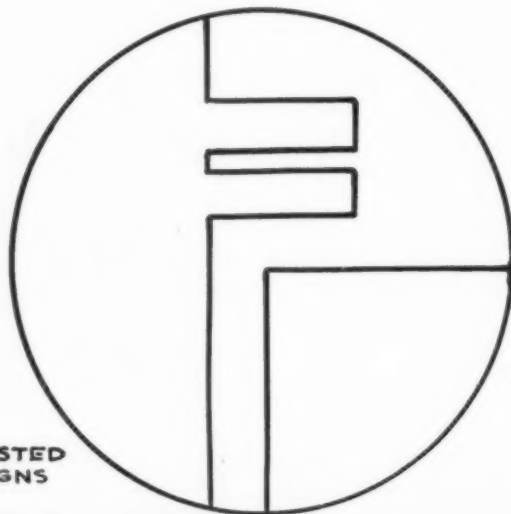
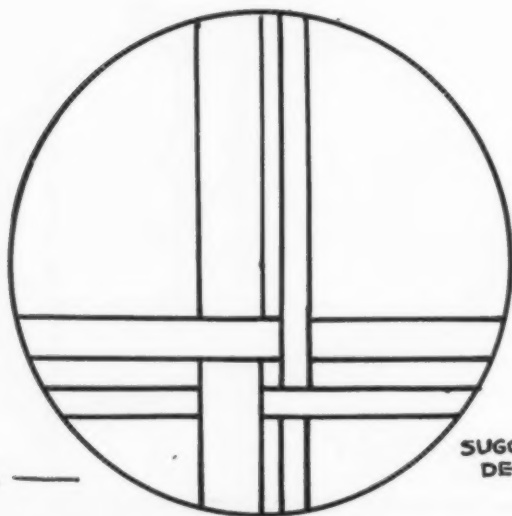
USING A 4 OR 5 INCH ZIPPER, SEW HALF TO EACH CIRCLE BEING CAREFUL TO HAVE IT PLACED EVENLY TO CONFORM TO THE DESIGN. STITCH THE ZIPPER IN PLACE BELOW THE LACING HOLES. BE SURE TO TURN THE ZIPPER ENDS WELL UNDER.

TOOL THE DESIGN ALONG A RULER EDGE

COURSE IN LEATHER

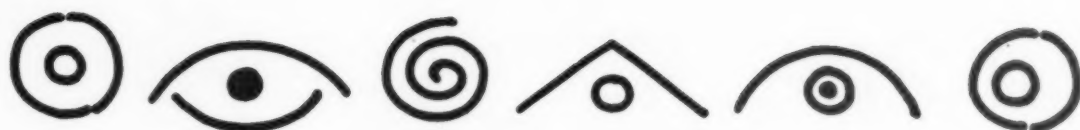


LACE BOTH SIDES TOGETHER. LACE TWICE THROUGH THE HOLES EITHER SIDE OF THE ZIPPER. PULL A NARROW PIECE OF LEATHER THROUGH THE ZIPPER TAB AND FRINGE OR TIE A BEAD ON THE END—



SUGGESTED
DESIGNS

R EDGE —



EYES

DEV



BILLS



COCKATOOS AND WINGS



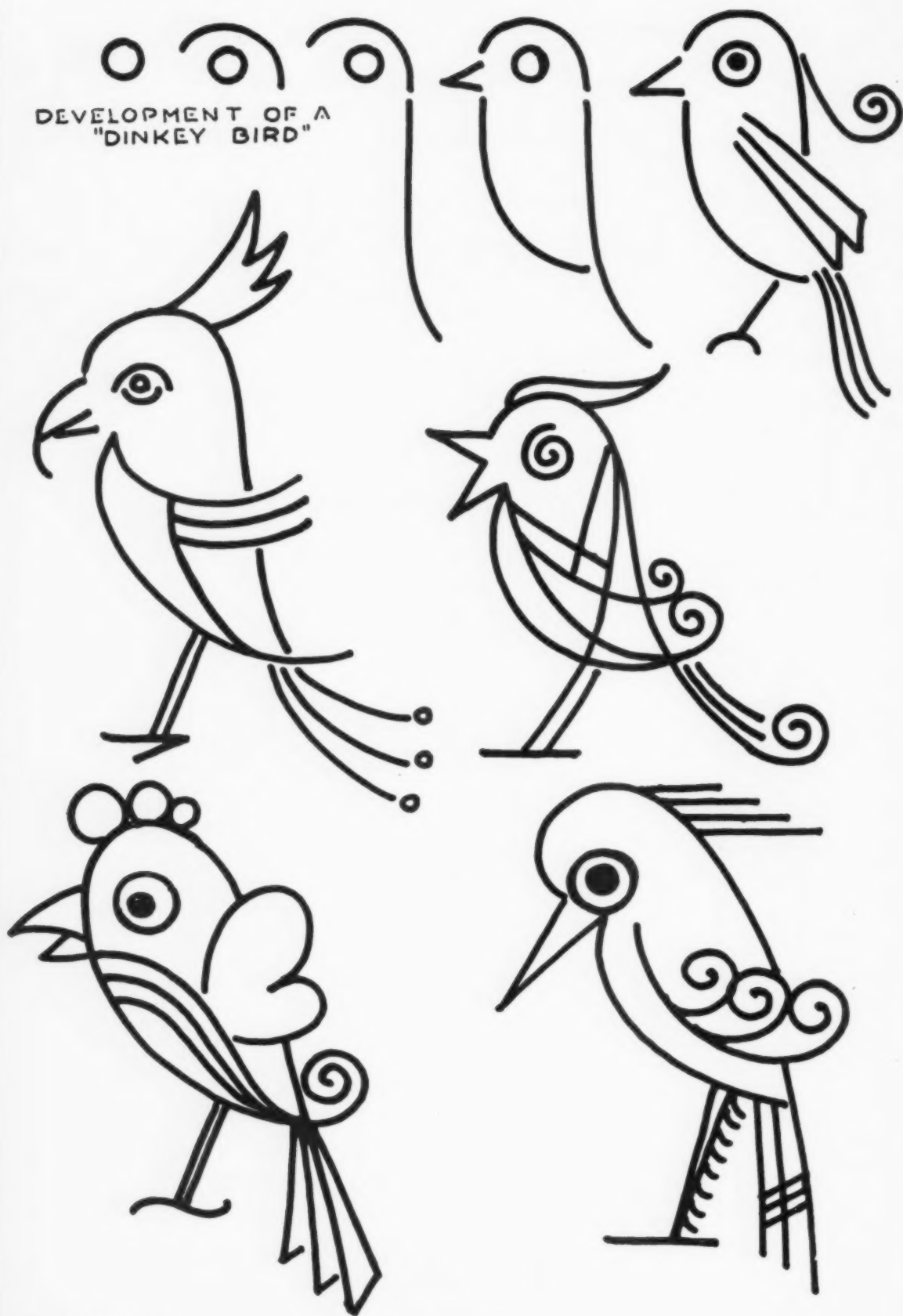
TAILS

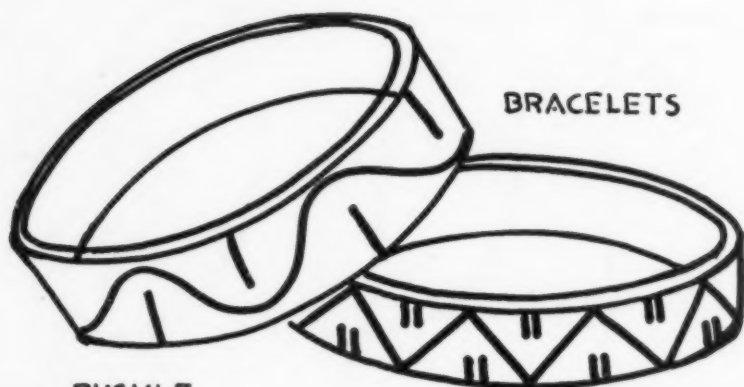
"THE DINKEY BIRD"

to illustrate the poem by
EUGENE FIELD

ANSTRICE CARTER KELLOGG
SAUGUS, MASS.

DEVELOPMENT OF A
"DINKEY BIRD"

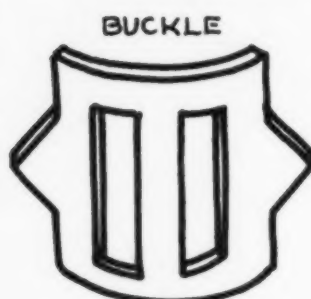




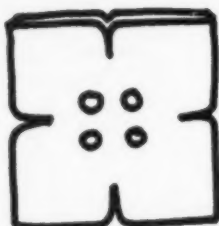
BRACELETS



TIE
SLIDE

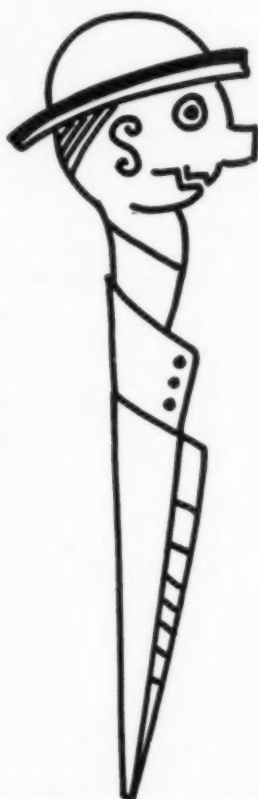
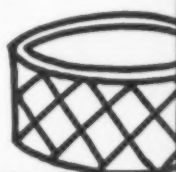


BUCKLE



BUTTONS

NAPKIN
RINGS

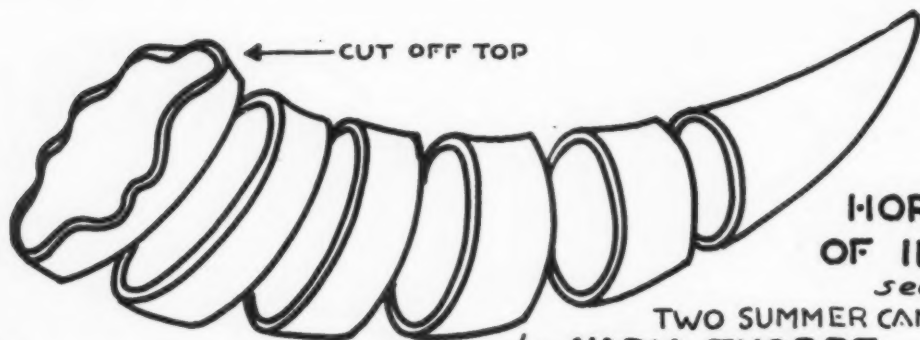


CIGAR BOX PAPER KNIVES

see TWO SUMMER CAMP PROJECTS

by **NADIA THORPE**

GREENBAY, WISCONSIN



A HORNFUL OF IDEAS

see

TWO SUMMER CAMP PROJECTS

by **NADIA THORPE**

GREEN BAY, WISCONSIN

BALANCE IN DESIGN

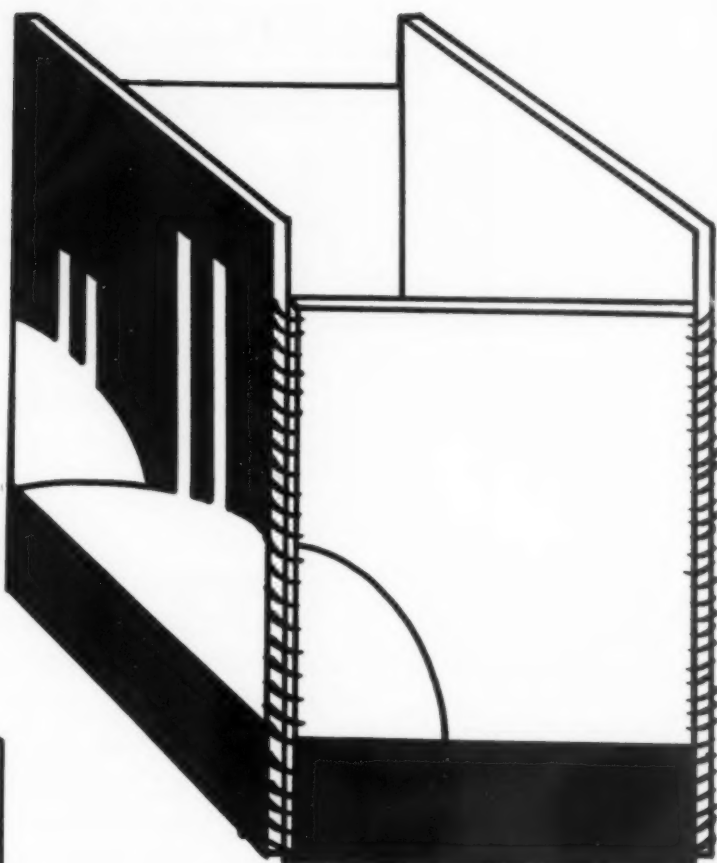
BY USING THE PRINCIPLE OF BALANCE AS APPLIED
TO A SEE SAW



LENORE MARTIN GRUBERT
NEW YORK SCHOOL FOR THE DEAF

**A
MODERN
WASTE-
BASKET**
*see article
by*

**STELLA
E.
WIDER**
*assistant supervisor
of art*
LYNCHBURG, VA.



*SIDE
PIECE
9½" x 12"*

*END
PIECE
9½" x 11*

*BOTTOM
9½" x 7½"*

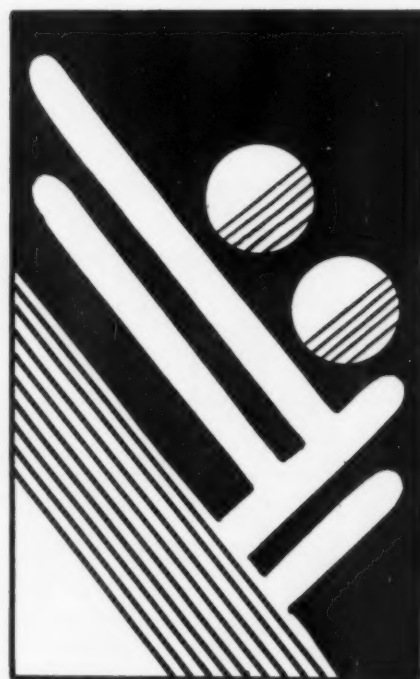
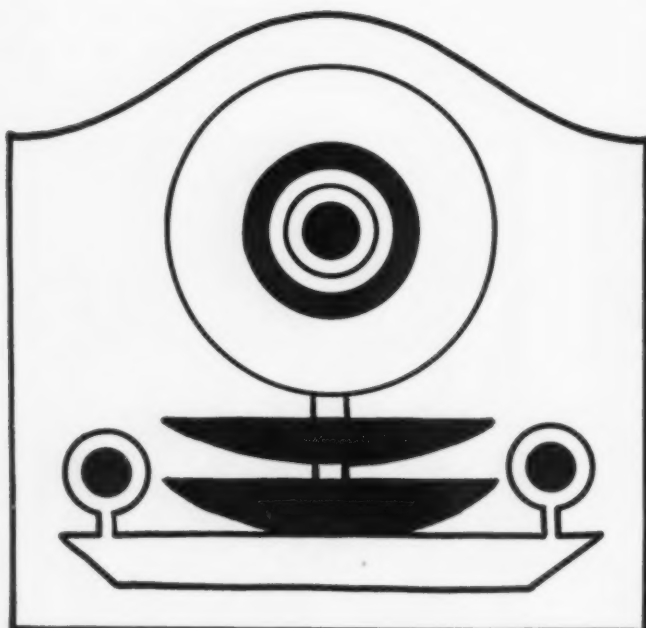
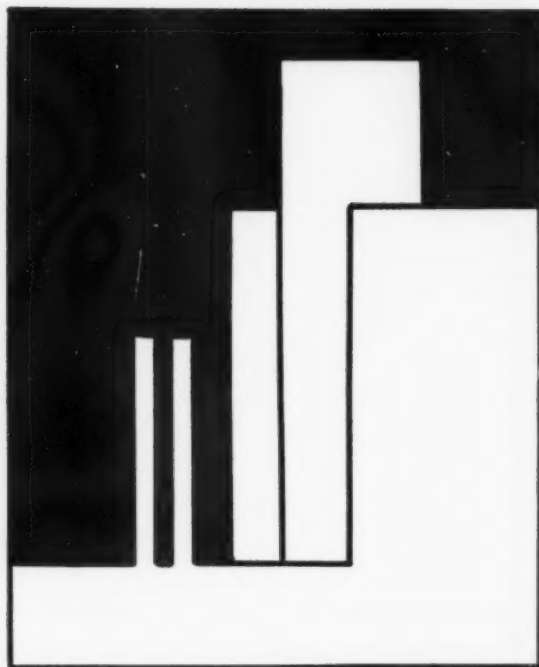
*SIDE
PIECE
9½" x 12"*

*END
PIECE
9½" x 11*

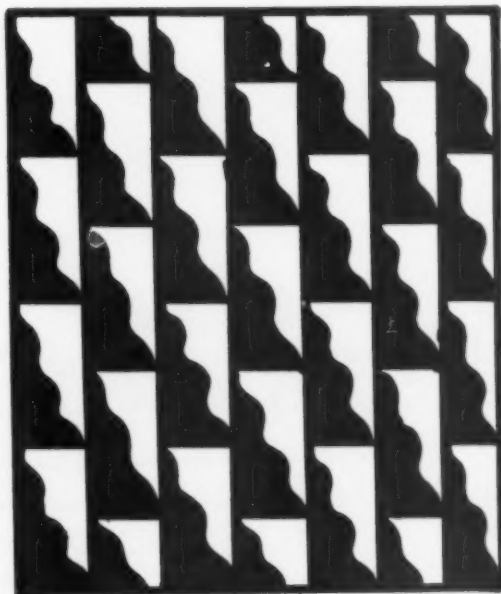
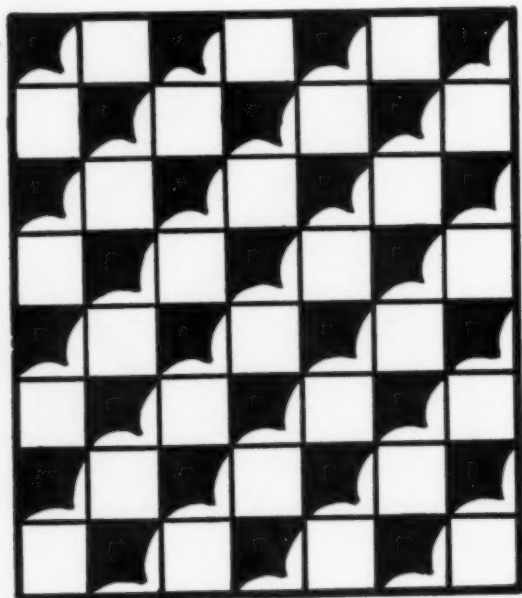
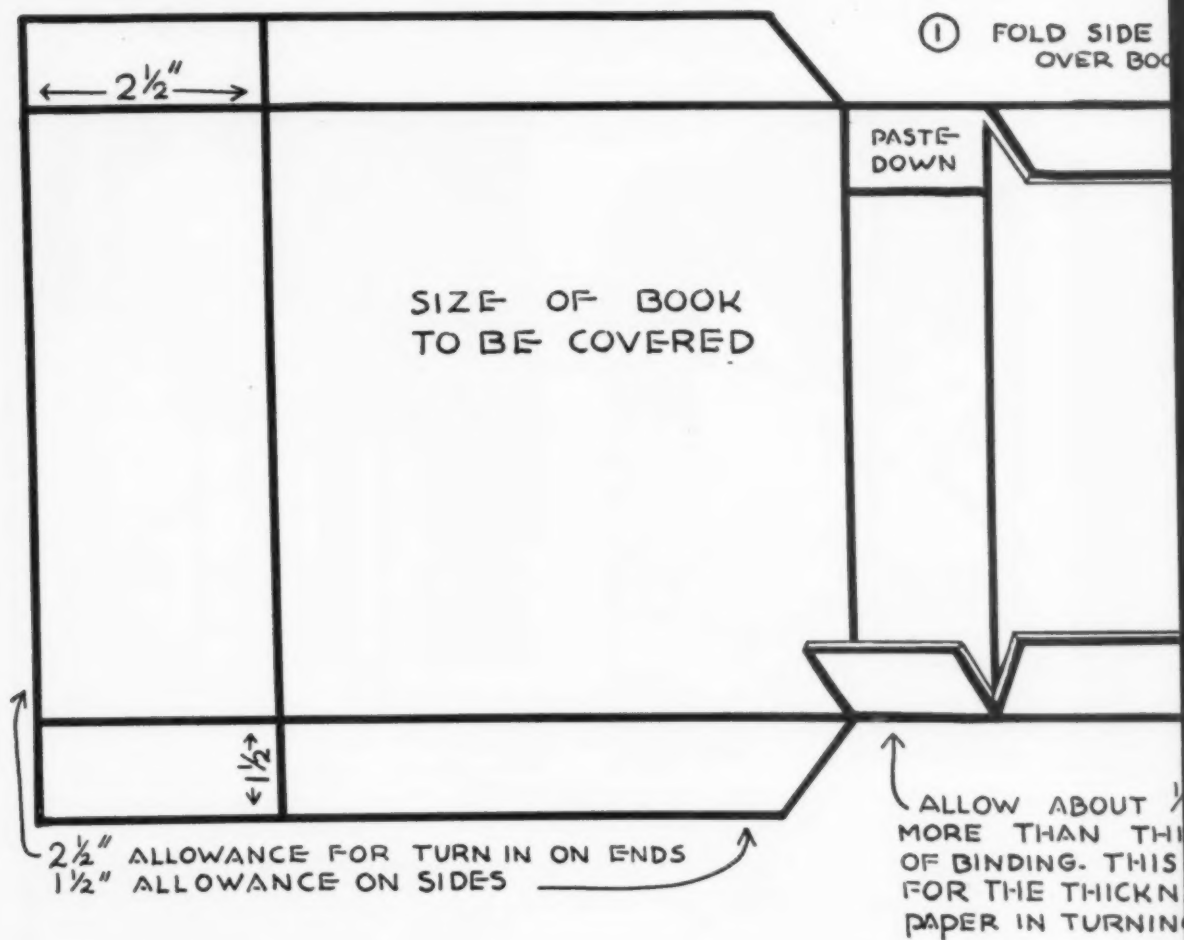
FIVE SECTIONS OF THE
WASTEBASKET TO BE
COVERED WITH CLOTH,
PAPER LINED AND
WHIPPED TOGETHER—
THIS PROJECT PRE-
SENTS UNLIMITED AP-
PLIED DESIGN POSSIBIL-
ITIES—

DESIGNS FOR "SCRAPS OF WOOD"

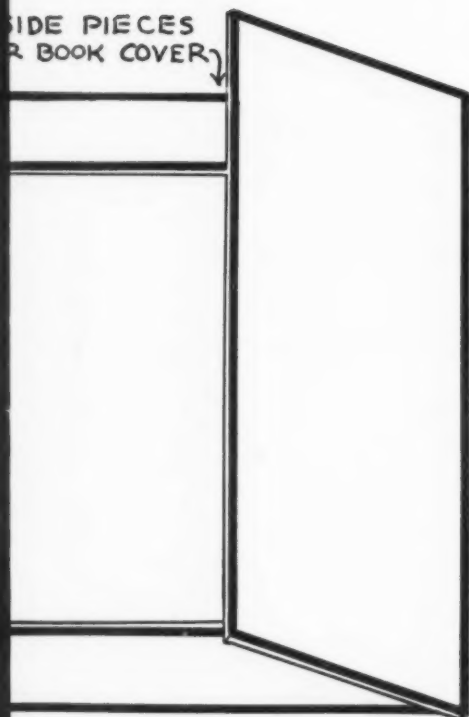
see article



BEULAH HILTON *teacher*
FRANCES PRENTICE *county art supervisor*



SIDE PIECES
FOR BOOK COVER



CUT $\frac{1}{8}$ INCH
THICKNESS
THIS ALLOWS
THICKNESS OF
TURNING -

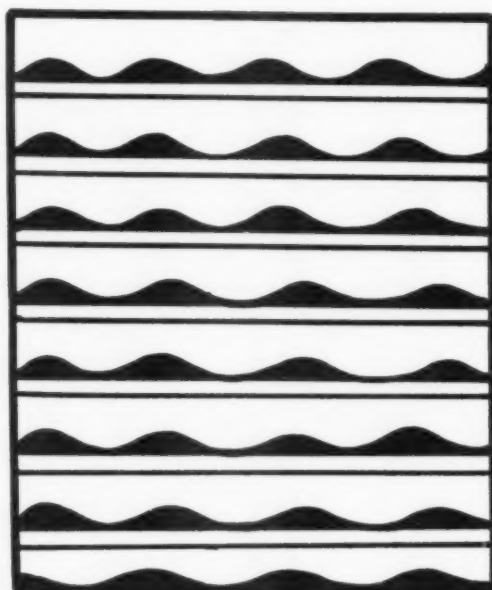
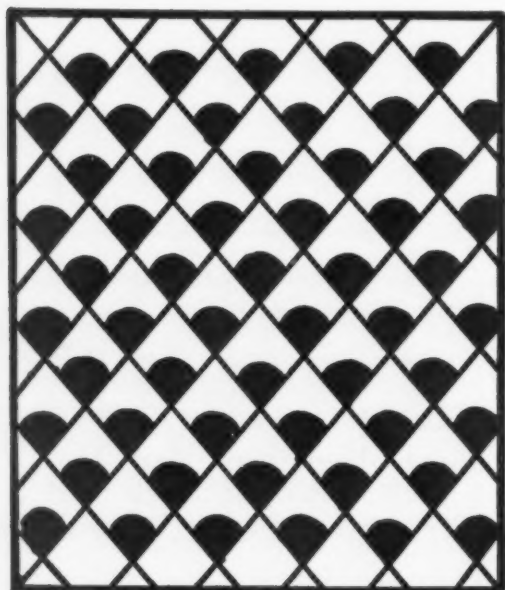
② FOLD IN END
PIECES AND TIP
ALONG EDGE WITH
PASTE.

PRACTICAL BOOK COVERS

for
TELEPHONE or
SCHOOL BOOKS

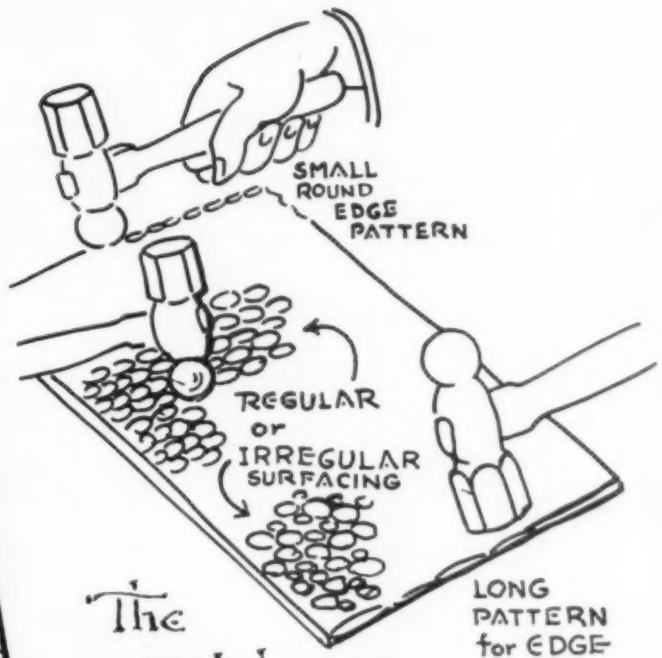
by
H. B. CONALLY
WAUKEGAN, ILL.

BEFORE CUTTING THE
PAPER MAY BE DECOR-
ATED BY RULING LINES
AT EVEN INTERVALS INTO
WHICH MAY BE WORKED
AN ALLOVER DESIGN -
COLOR WITH WAX CRAYONS
AND PRESS ON THE WRONG
SIDE WITH A WARM IRON.



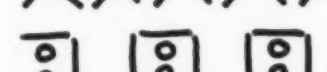
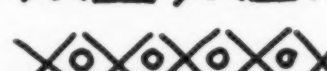
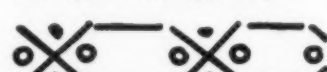
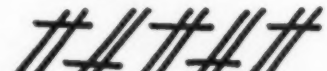
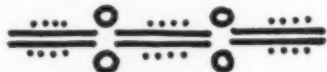
1101

15¢ Tools
used for
stamping
patterns



The
metal may
be surfaced as above
before stamping

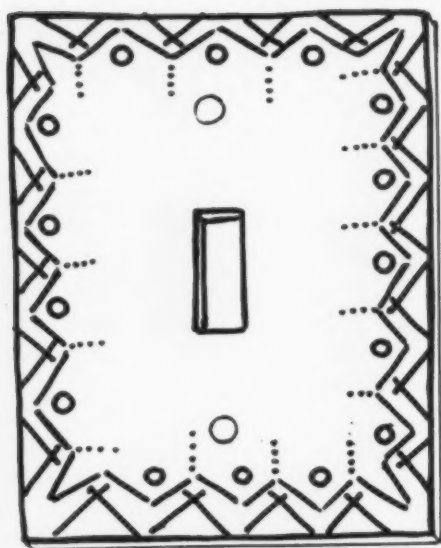
A FEW DESIGNS



Hundreds of patterns
may be invented
with only these
three marks



Use thin
sheet iron
copper or
brass



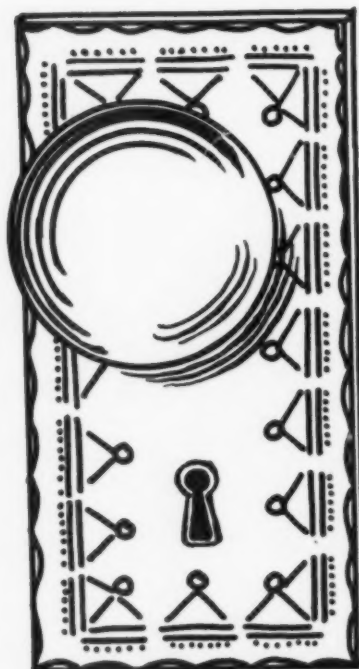
Light Switch



Book Supports



Door Knocker



Door Plate

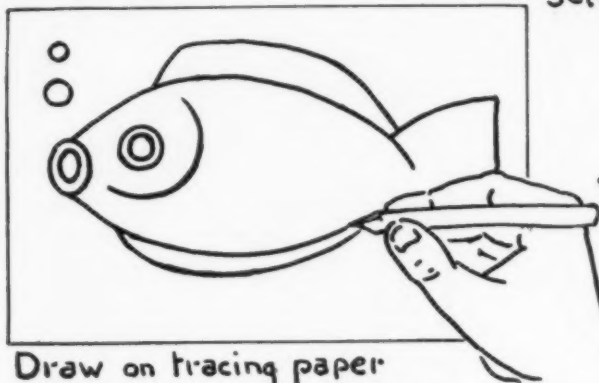


Door Latch

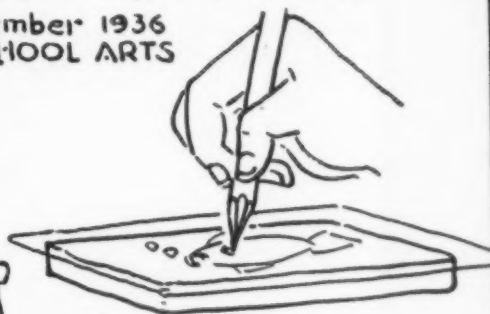
fixtures for
Spanish
Italian or
Brittany
type Homes

A LESSON in BAS-RELIEF CARVING

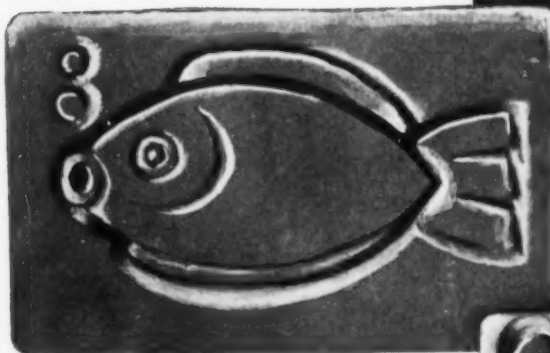
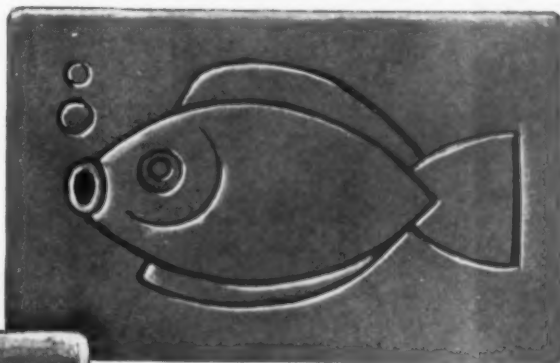
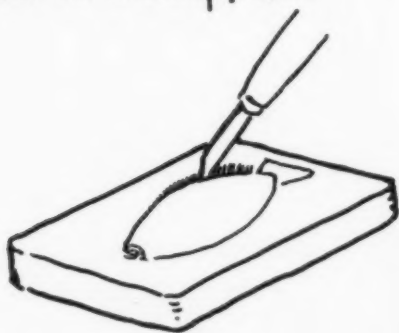
For carving material see p.197 - December 1936
SCHOOL ARTS



Draw on tracing paper



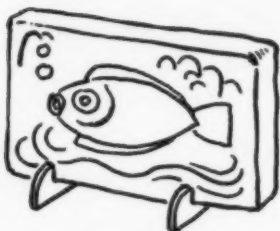
Place tracing paper over wax and trace with a blunt pointed pencil



① Go over lines with blunt point

② Scrape back from line with knife

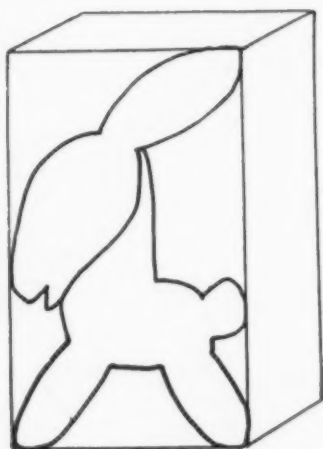
③ Cut down background, round edges, add details



To stand against light for transparency sink heavy card or tin into wax as support



and CARVING in the ROUND



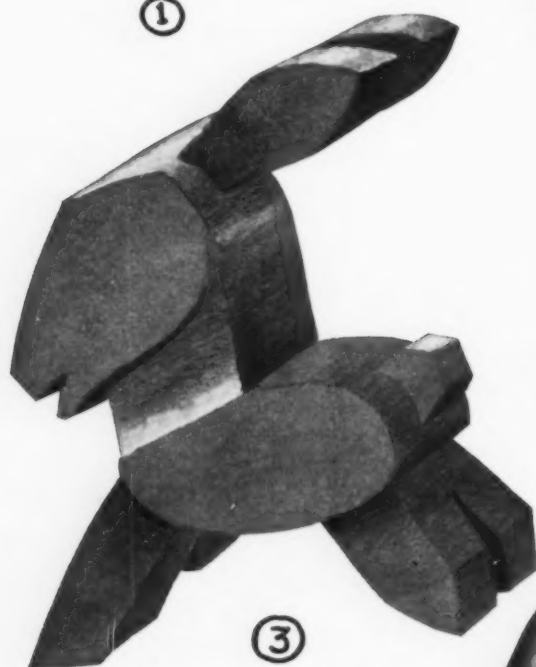
①



②

①
Draw outline
of object on
carving material

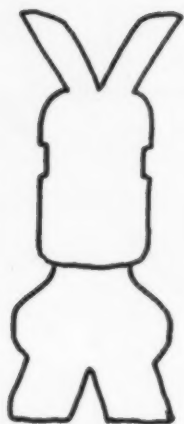
②
Using as
simple a line
as possible
cut clear
through block



③

③
Cut ears, tail, legs,
neck in *from* both
sides. Notch legs
and ears

④
Round off all edges
and add details.



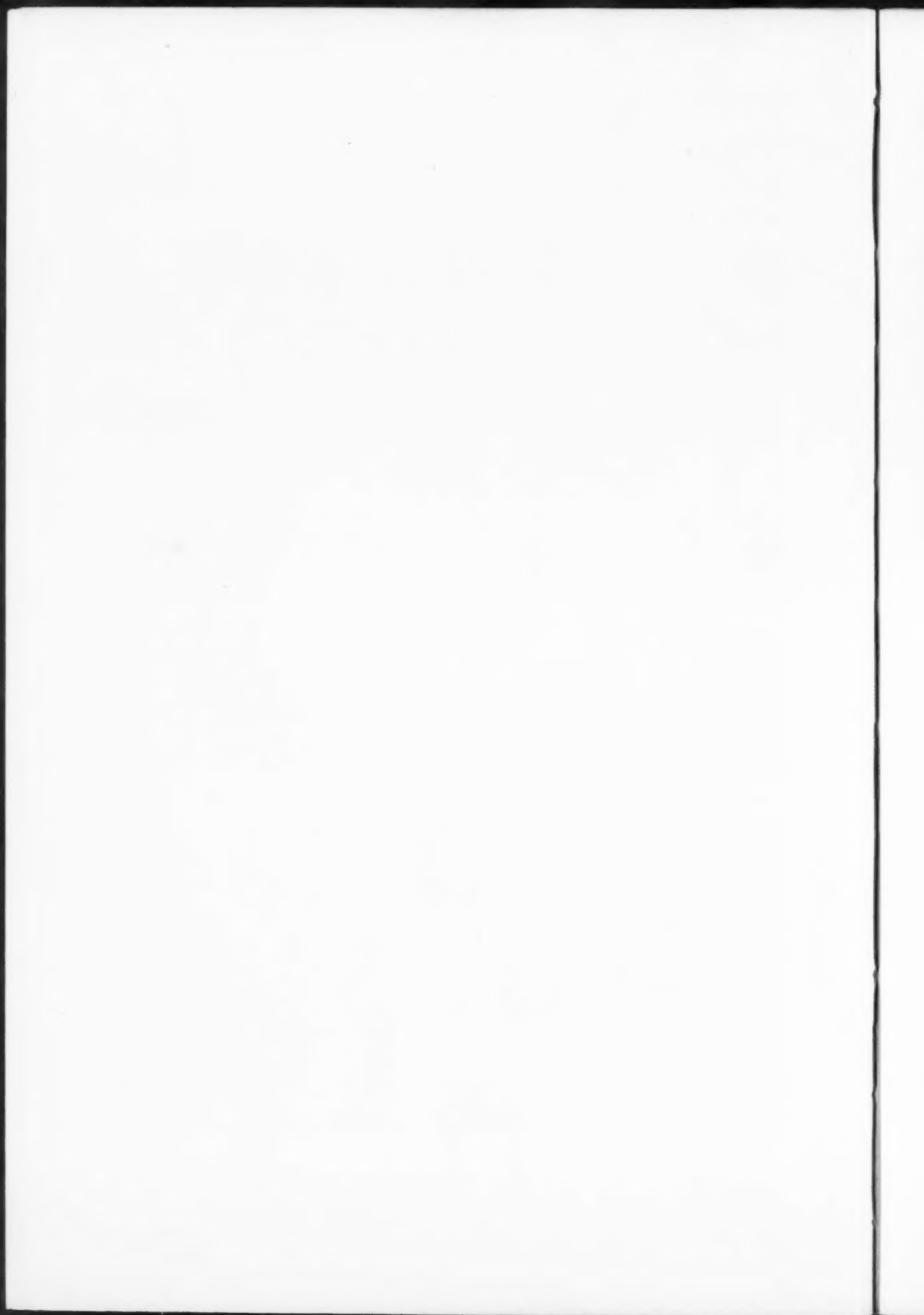
Front
view



④



ABOVE: "BLACK MUMBO IS MAKING PANCAKES. THE WOOD IS BY THE FIRE AND THERE IS A CALENDAR ON THE WALL." BY HARRIET OLINSKY, SIX YEARS OLD. BELOW: A BOWL OF FRUIT PAINTED IN TEMPERA BY ROBERT HOFFMAN, SIX YEARS OLD. WORK OF THE FIRST GRADERS IN THE HEMPSTEAD PUBLIC SCHOOLS, HEMPSTEAD, LONG ISLAND. ANNA McMAHON, TEACHER





EMBOSSSED PLAQUES MADE FROM THIN BRASS AND COPPER BY STUDENTS OF NATALIE WILKINSON, ART INSTRUCTOR, KENOSHA SENIOR HIGH SCHOOL, KENOSHA, WISCONSIN

"ABC" ABOUT BRASS AND COPPER

NATALIE WILKINSON, *Art Instructor*
Kenosha Senior High School, Kenosha, Wisconsin

LIVING in a manufacturing town has its advantages, particularly if one of the large industrial concerns is the American Brass Company. How more than appropriate that, through interest in the town's industries, the students should develop a means of expression in a medium immediately at hand. With this in view, I arranged for one of my classes to be taken through the mill so that it might see the processes in the manufacture of brass. The trip was enormously successful and with interest stimulated to a high pitch, I asked my students how they thought we might work out something in copper or brass. Because of the fact that our room is only a classroom

and not equipped with the facilities or tools of a regular laboratory, it was necessary to temper our desires to our available means of accomplishment. For this reason we selected a very thin brass and copper—about 30 gauge. It is very pliable and can easily be cut with ordinary scissors. In the course of our classroom conversation we discussed the etching of metal but, for the aforementioned reason, did not approach our problem from that angle. Embossing and bending were possible, so our thinking proceeded along these lines. What could we make?

I explained the very simple process of embossing and suggestions were forthcoming immediately. "Why not make a plaque?"

"But the metal is too thin to be effective by itself."

"Well, mount it, of course."

"On what?"

"Why use your head, silly!"

Whereupon the student proved that he did have a head and at once replied:

"Wood."

From that beginning developed many ideas and our final display carried plaques mounted on wood stained various colors, rubbed down and waxed. Wood cut to size from the woodwork department and breadboards from the ten-cent store adequately answered our needs. The metal was nailed to the wood with small round nails, either black or copper, and it was suggested that the nails be put on in such a way as to be an integral part of the design. Then linen was stretched over stout mounting board, sewed in the back and copper or brass plaques mounted on this. Small size wire shanks

were used here for fastening instead of nails. Black, natural, and brown fabric was used. Of these I thought copper on brown linen was the most stunning. One particularly adventurous girl mounted her copper on a very rough brown sandpaper and the effect was quite unique. Another student chose sheet cork, about one-eighth of an inch thick, as a medium for his mounting. By cutting a hole in the center of the cork the size of his panel, and allowing about one-quarter of an inch on all sides of the copper for bending, he recessed the panel. Not all the edges of the various plaques were left perfectly



THIS BIRD WAS MADE BY BENDING THIN METAL

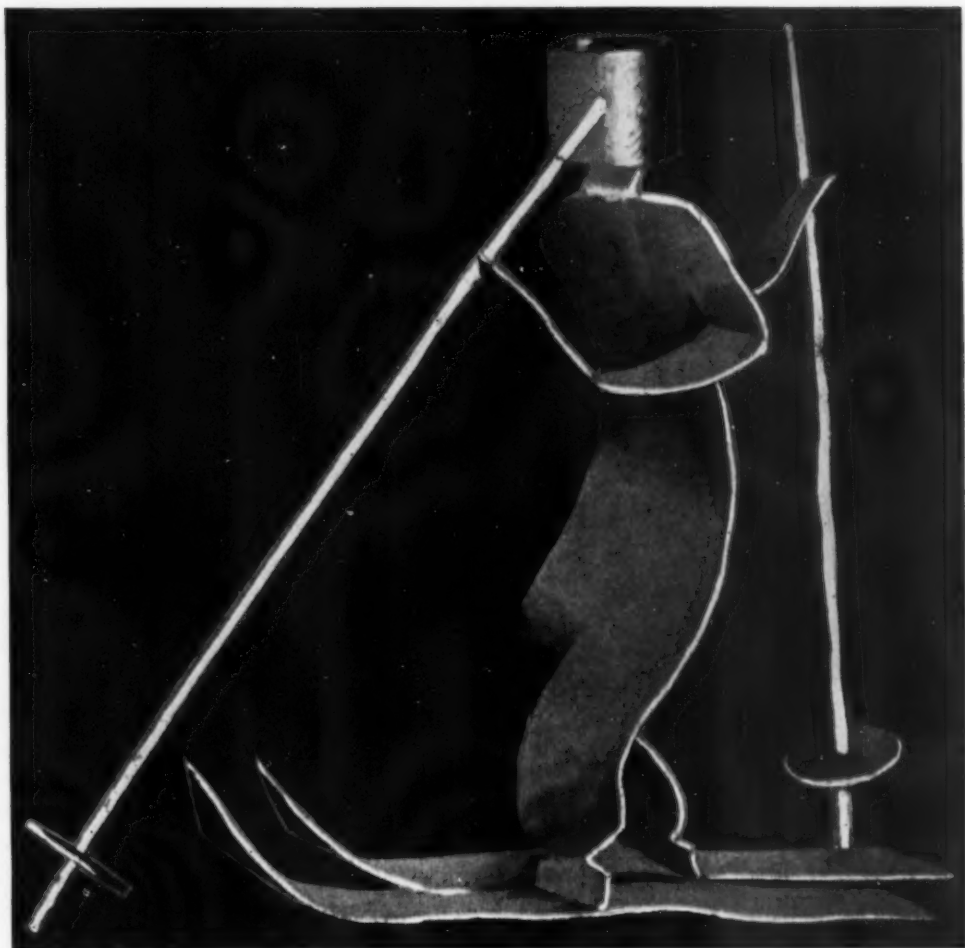


FIGURE MADE BY BENDING THIN METAL. THE
SKI POLES ARE OF WOOD WITH METAL DISKS

straight, by any means. Some had a series of notches, others points, and some scallops or reversed scallops.

In addition to plaques, the copper was used as a means of decoration for box tops, two of which are shown in the illustration. Little circular boxes from the ten-cent store, as well as oblong ones, and some brought from home served our purpose here. The very shortest nails available proved too long to fasten the copper without showing on the inside of the box, so end-cutting pliers shortened the nails. Small wooden chopping bowls decorated with embossed copper or brass made very practical nut bowls.

Just a word about embossing, for those

who may not have experimented with this method. The metal is polished with powdered pumice and linseed oil. Then the design is traced by laying it on the metal and going over the lines, quite firmly, with a pencil. By pressing down on the metal with modeling tools or an ordinary orangewood stick, the metal is raised. A bath towel folded several times provides adequate padding to put under the metal. The most satisfactory results are secured by raising the metal gradually to the degree of relief desired. If it is forced too much, it will crack. After the plaque has been given a final polish, a coat of clear lacquer or ordinary natural nail polish will act as a preservative. If one

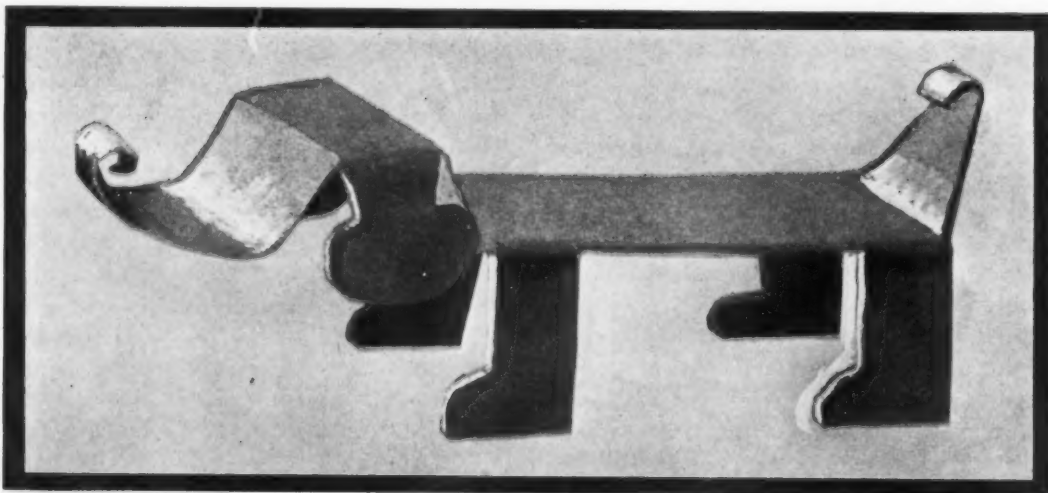


DRUM MAJOR MADE OF BENT METAL

prefers wax instead of lacquer, this also is possible. All of these articles were made at a

remarkably reasonable cost and proved so popular that some students took orders for work to be done outside.

Besides all these possibilities in embossing, there is still bending and cutting to be mentioned. Humorous little three dimensional figures and animals were our aim here. First, a design was planned in two dimensions on scrap paper—planned, cut, tried, and redesigned many times on much scrap paper until, finally, a workable figure evolved. Carbon was used for tracing the design to the brass. After the metal had been cut, it was polished with linseed oil and powdered pumice before it was bent. Lastly, it was bent, curled, or folded into shape and given a coat of clear lacquer. In designing, I suggested to the students not to strive for realism but to recognize the limitations of the material and tell their story with as few and simple bends as possible. I asked them why they didn't have a really good time and design something amusing instead of being so very prosaic. In the illustrations one sees a cocky drum major and a maiden who would a-skiing go. After the figures were completed, the students felt that they had learned something of their town, quite a bit about the possibilities of brass and copper and had a good time creating something.



THIS LITTLE DOG IS SIMPLE TO MAKE FROM THIN METAL

SIXTH GRADERS FORM CRAFT GUILDS

MARY EMMA HARRIS

Cleveland, Ohio

I. INTRODUCTION

Last year in our discussions of current events in Oxford School, Cleveland Heights, Ohio, the topics which presented themselves most frequently were those of earning a living and of using wisely increased leisure time. Since medieval life was prescribed for the semester's work, it seemed desirable to develop those aspects of life in the Middle Ages in which the children were interested.

II. PROCEDURE

The suggestion that a study of merchant and craft guilds would show how medieval people managed the problems which the children had discussed brought an eager response. With the help of the history text, a list of questions was made by the children and copied on the blackboard. The reference books, already arranged, were pointed out. A set of folders with numbers corresponding to the numbers of the questions on the board were put on the shelf, and the children were asked to put the written answers to each question in the proper folder as the information was found. Reading and discussion followed until the various phases of guild life were covered.

Reading periods during this time were used for a study of "The Boy Knight of Reims" by Eloise Lowmsberry and "Gabriel and the Hour Book" by Evaleen Stein. English periods were devoted to story telling of medieval characters and events. Soon this reading and study bore desirable fruit.

"Why can't we have guilds and make things?" was asked. This suggestion was approved at once by children and teacher. However, considerable discussion took place

before what to make could be decided upon and guilds chosen. Finally the children divided themselves into four groups. One group was to make a tapestry, one a stained glass window, one a book, and one carved wood tea tiles. Each group organized itself into a guild of masters, companions, and apprentices, to each of whom were assigned duties as much like those performed in the Medieval Ages as possible.

Now followed a period of rereading, picture study, and consultation with our supervisors as to how we could carry out our ideas. Not the least valuable part of this phase of our work was the trip to the Medieval Room of the Cleveland Museum of Art where examples of carved woods, stained glass, tapestries, and manuscripts were studied.

III. ACTIVITIES

The members of the book guild announced their plans first. They wanted to make a book called "In Guild Days." They asked each member of the class to write a story, or an article, about guild life. When the teacher suggested that the material found in answer to the questions listed on the board could be used, the class readily agreed. Each child chose one of the questions, or some part of a question, to answer, and was given the folder containing the material relating to his problem. The articles were written, read to the class for suggestions, corrected, and then lettered on sheets of drawing paper (twelve inches by eighteen inches). The guild decorated each page with illuminated initial letters and borders. End sheets, dedication and title pages, and the cover were designed and painted. The cover was made of chamois skin painted with colored ink. The book was then bound.

The woodcarver's guild chose to make tea tiles. The children of this guild planned chip carving designs that could be cut with razor blades and linoleum tools. These designs were placed on six-inch squares of red gum wood and carved. The guild voted to use the tile designs on boards that could be built into a chest. The designs, with a simple

pattern between them were copied on the red gum boards, and an attractive border was made around the whole design. The carving was done by the children, and the chest was built by our manual activity supervisor.

The tapestry guild decided upon a hanging that would illustrate the story of "Gareth and Lynette." The design showing the two castles, the bridges, and the combat at the second bridge was made on wrapping paper with colored chalk, and then transferred to monk's cloth. To work out the design, each child chose some part on which to work. The threads, one by one, on each side of that part were cut and drawn out. Then yarn of the color chosen was woven in. The adjacent strands of thread were tied securely underneath. The tapestry was stretched on curtain stretchers during work periods. In spite of the fact that the tapestry was so large that much extra time had to be given to it, a satisfactory hanging resulted.

The children who wanted to make a stained glass window decided to design one that would illustrate phases of guild work and that might have been used in a guild hall of the Middle Ages. One child illustrated the work of the armorer, another the goldsmith, and so on. These illustrations were transferred to one large sheet of unbleached muslin. All the lines were colored with heavy black crayon, and the illustrations were colored with dyes put on with paint brushes. Each dye was allowed to dry before the one next to it was put on to avoid spreading of the dyes. Although this window was the least artistic of all the pieces of work made by the guilds, it was very effective in use.

Long before the guilds had finished their work, the demand for a guild play in which to use the articles being made as stage properties, had arisen. The class had relived this period so thoroughly that situations were planned and conversation written almost as easily as though the children had actually experienced the events they were portraying. "In Guild Days" was presented very successfully to our school patrons.

The guild project ended very happily with the annual tea for mothers at which reports on the work were given. Then all the articles were presented to the school.

IV. OUTCOMES

Character development stands out as the most valuable outcome of this project. A group of careless, selfish, inconsiderate children under a regime in which they planned, executed, supervised, and evaluated their own tasks became one of the most co-operative, capable, thoughtful classes the writer has known. The wide reading and countless demands for both oral and written English resulted in a wider vocabulary and in an increased ability to express ideas. Class objections to a misrepresentation of even the most minor historical fact, when the exigencies of the dramatization writing required it, illustrated how thoroughly familiar the history of this period had become to them. And not the least of the gains to be recorded were the children's increased ability to handle tools, their understanding of the high ideals of craftsmanship that motivated the workers of the Middle Ages, and their keen appreciation of hand work of all kinds and times.

V. BIBLIOGRAPHY

THE NEW WORLD'S FOUNDATION IN THE OLD. By West & West. Publishers, Allyn & Bacon, Boston, Mass. Price, \$1.15.

OUR OLD WORLD BACKGROUND. By Beard & Bagley. Publishers, The Macmillan Company, New York, N. Y. Price, \$1.02.

AMERICAN BEGINNINGS IN EUROPE. By Gordy. Publishers, Charles Scribner's Sons, New York, N. Y. Price, \$1.12.

OUR ANCESTORS IN EUROPE. By Hall. Publishers, Silver, Burdett and Company, Boston, Mass. Price, \$1.20.

WHEN KNIGHTS WERE BOLD. By Tappan. Publishers, Houghton, Mifflin Company, Cambridge, Mass. Price, \$3.00.

LIFE AND ADVENTURE IN MEDIEVAL EUROPE. By R. J. Mitchell. Publisher, Longman's Green, New York, N. Y. Price, \$2.00.

LIFE ON A MEDIEVAL BARONY. By W. S. Davis. Publisher, Harper Brothers, New York, N. Y. Price, \$3.50.

THE STORY OF THE MIDDLE AGES. By Harding. Publisher, Scott, Foresman & Company, New York, N. Y. Price, 65 cents.

THE BOY KNIGHT OF REIMS. By Eloise Lowmsberry. Publisher, Houghton Mifflin Company, Cambridge, Mass. Price, \$2.50.

THE APPRENTICE OF FLORENCE. By Anne D. Kyle. Publisher, Houghton Mifflin Company, Cambridge, Mass. Price, \$2.00.

GABRIEL AND THE HOUR BOOK. By Evaleen Stein. Publisher, L. C. Page & Company, Boston, Mass. Out of Print.

IN THE DAYS OF THE GUILD. By Louise Lamprey. Publisher, Frederick A. Stokes Company, New York, N. Y. Price, \$2.50.

MASTERS OF THE GUILD. By Louise Lamprey. Publisher, Frederick A. Stokes Company, New York, N. Y. Price, \$2.50.

TWO SUMMER CAMP PROJECTS

NADIA THORPE

Assistant Director of Camp Hitaga

Art Teacher

East High School, Green Bay, Wisconsin

(See "Open-up Section")

A HORN FULL OF IDEAS

THERE is something about a summer camp that makes it peculiarly conducive to creative experience. Given a group of young people (boys or girls) comparatively removed from their everyday worlds and the usual sources of supplies of various kinds, and a surprising wellspring of imagination provides interesting solutions to every want. It is an experience without parallel, and one that cannot help but leave its favorable mark on the child. Oldtime campers and counselors, with years of experience, come away each fall with new enthusiasms and ideas to carry into many different kinds of winter programs.

Living out of doors in settings of such natural beauty as most camp sites are, seems to create a desire for expression. Handcraft is always popular. The woods seem to be an unusually appropriate place to work with design and color, and offer such a wealth of natural illustrative material. Aside from the beauty, the faculty of seeing

possibilities in usual places and materials is stimulated. It is surprising to see what can be made or worked out from apparently nothing. Leaders are always on the lookout for ideas and projects that will fire the youngsters' fancies. Often they come from most unexpected corners.

One of the most popular handcraft projects at Camp Hitaga (near Cedar Rapids, Iowa) this summer, was one of this unusual and unexpected variety. Boys at Camp Waubeek (nearby Boy Scout Camp) had procured some cow horns, and enjoyed making powder horns, tie slides, etc. Borrowing the idea, we experimented. Its enthusiastic reception by the girls surprised us all. A local meat packing plant was glad to save us the horns, and we would get quite a carton full at a time. There were all sizes—from small ones of about four or five inches to some that measured ten or eleven inches. Some were white, some brown, some black and white, and others various mixtures. Looking the lot over, it was hard to believe that anything attractive could come from such a dirty, scarred, smelly mess. The Cinderella-like transformation may have been part of the charm.

The obvious thing to make was a horn. For this the longest and nicest shaped horns were chosen. The first step was to file off the scarred outer layers. The irregularities of the open end were then sawed off. The tip of most horns is solid. Through this we bored with a small bit (three-sixteenths-inch) after sawing off the extreme point until the end had a diameter of about three-quarters

of an inch. Into the end a conical shaped hole was made with a countersink, to form a mouthpiece. (At this point the horns will blow, and some of them have very clear tones.) Each girl decorated her horn to suit her fancy. Some used initials and dates as well as other simple designs, carving them in or cutting away the background so that they stood out in relief. Equally effective were stripes filed into the surface. By making a deeper groove below the mouthpiece, and another near the large end, a thong or lanyard could be attached by which to hang the horn. A good polishing with the bare hands gave an attractive finish.

Many attractive bracelets were also made. For these only the largest horns could be used. A ring of the desired width was sawed off, filed, and polished in the usual way. Some were carved, and others painted, although they were quite effective left plain.

From the ends of horns too small for bracelets, or from larger ones that had had bracelet widths cut off, napkin rings were cut.

Very small horns, and ends of large ones, were converted into tie slides. Into the concave side, at a point above the solid part of the tip, a hole was cut, for the ends of the kerchief to go through. This left the whole front for decoration.

Powder horns are just as attractive a project, but naturally appeal more to the boys.

As I have said, this was quite an unplanned thing that popped in toward the end of our season, but I think it has possibilities far beyond those we worked out, which might prove interesting in school work, and with various leisure time groups. Buckles and buttons immediately come to mind. Paper knives might be an idea. When the few tools required are at hand, the cost of these projects is practically nil—a point which makes an appeal to most groups.

CIGAR BOX PAPER KNIVES

Small paper knives of wood, decorated and colored, have proven to be a very popular

problem with our junior high students. Just now when we are all anxious to offer interesting problems that do not require elaborate equipment or a great outlay of materials, it is particularly apropos; and its cost to the pupil is nothing.

Cigar boxes furnish wood of just the right thickness in convenient sized pieces. Most pupils have little difficulty in securing such material. Since the top, bottom, and sides will make six good-sized pieces, one box can be shared among a group.

We precede our designing work with a discussion of the possibilities and limitations of the problem, and emphasize the following points:

1. The knives average seven or eight inches in length.
2. It is necessary to keep the proportion of blade and handle pleasing (one-quarter to one-third of total length for handle).
3. Since the cutting is done with a coping saw, the outline must be quite simple.
4. Any narrow places or small projecting parts are to be avoided—they break off very easily.
5. Since the blade is a "cutting" part, its shape should be very simple.

No limitations are set on the subject matter for the designs, and after this preliminary discussion, the work on designs is begun. We work for variety of subject and shape. After a period of work and criticism, we choose each pupil's best and most interesting idea, which he perfects.

Thought is then given to color. After this has been satisfactorily worked out, each design is worked out in ink and water color (to provide a record of the design after the child has taken his knife home.)

The actual construction is, of course, the exciting part of the project, and we proceed as follows:

1. Remove the paper from the cigar box wood. Avoid the use of too much water since the wood warps very easily.
2. Transfer the outline of the design to the wood.

3. Cut out with a coping saw.
4. Use a knife to sharpen one or both sides of the blade.
5. Sandpaper until every part is as smooth as possible.
6. Draw in the detail of the design.
7. Shellac to secure a better painting surface. (The wood is very soft and absorbs the paint.)

8. Paint with poster paint. (Other colors could be used.)

9. Outline the design with India ink. This gives a sparkling, conventional effect, and hides any irregularities in the painting.

10. Shellac to finish.

The finished knives are very attractive and the response of every class to the problem makes it a joy to teach.



WOODEN BOWLS FROM THE TEN-CENT STORE WERE DECORATED WITH CREATIVE DESIGNS THAT WERE INSPIRED BY A STUDY OF GARDEN AND FIELD FLOWERS. THEY WERE COLORED WITH WAX CRAYON AND SHELLACKED. BY FOURTH GRADE PUPILS OF SAIDA WEST, NORWOOD, OHIO

ART AND HISTORY ACTIVITIES

GRADE	I	II	III	IV	V	VI
PERIOD	HOLIDAYS INDIANS & ESKIMOS	INDIANS CLIFF DWELLER EARLY MAN	DWELLERS TREE CAVESEA PASTORAL	COLONIES PAST & PRESENT EXP. & DIS.	AM. REV. NEW REPUBLIC, PA CIVIL WAR	EUROPEAN & BACKGROUND AM. HISTORY
FOODS	Illus. of Indian Hunting Stories Modeling. Holiday Menus	Illus. of Indian Industries - Grinding Corn Making Pane.	Dramatization and Illus. of Hunting, fishing and Prep. of Foods	Book on Foods. Bring Pictures for mounting. Health Unit.	Illus. of Farming Trading, and Hunting in Rev. Times in Tenna.	Chart of "Imported Foods"
CLOTHING	Reconstructing Costumes of Indian and Eskimo for Sand Table. Collect Pictures	Sand table to show experience of Cliff Dwellers in providing Clothing	Construction of clothing from skins and fur. Illustrate.	Simple Weaving Problem. Drawings to show textile Processes.	Class Frieze to show Clothing of Periods covered Drawings from Human Figure	Making of Puppets for History of Costume Pageant.
SHELTER	Drawings of Indian & Eskimo Dwellings. Dramatize	Reconstruction of Indian & Eskimo Village	Construction of Homes of Tree Cave, Earliest People. Make a "Mexico"	Construction of Log Cabin Drawings of Explorer's Boats.	Drawings to show Elements of beauty in early Tenna. buildings.	Building of Boats used in bringing colonists to America.
RECORDS	Holiday and Greetings Decorations Picture Language of Indians.	How Records were kept, - "Movie"	Cut Outs to illustrate mode of record keep- ing.	Visit to printing shop to see processes or to Museum. Grade 5.	How Records were kept in Colonial Times. Printing Press Grade 4.	Study of pic- tures of five buildings in Europe and America. Pageant Poster.
UTENSILS	Illustrations of Indian grinding Corn.	Drawings of implements and weapons.	Illustrated Stories of the Primitive Feast. Clay Modeling	Illustration of Colonial Kitchen. Clocks. Time Unit	Book of desk Furniture from Wash. to Lincoln.	Drawings from articles made by pupils themselves.
TOOLS	Make Indian Tools from clay, wood etc. Collect suit- able material	Toys of Indian and Eskimo re-constructed	Collecting pictures to illustrate stories of "The Hunt"	Tools of the Colonial Period Drawing of Pilgrims carrying guns	Bring in Tools used in Early Tenna.	Trip to The Museum or place of Historic Art interest.




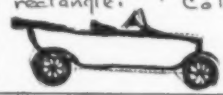
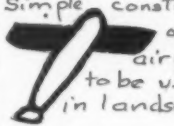

Bess K. Jones.

OUTLINE OF ACTIVITIES RECEIVED FROM BESS K. JONES, RENOVIA, PENNSYLVANIA
BASED UPON HER STUDIES AT THE SUMMER SESSION AT PENN STATE COLLEGE

A UNIT OF WORK

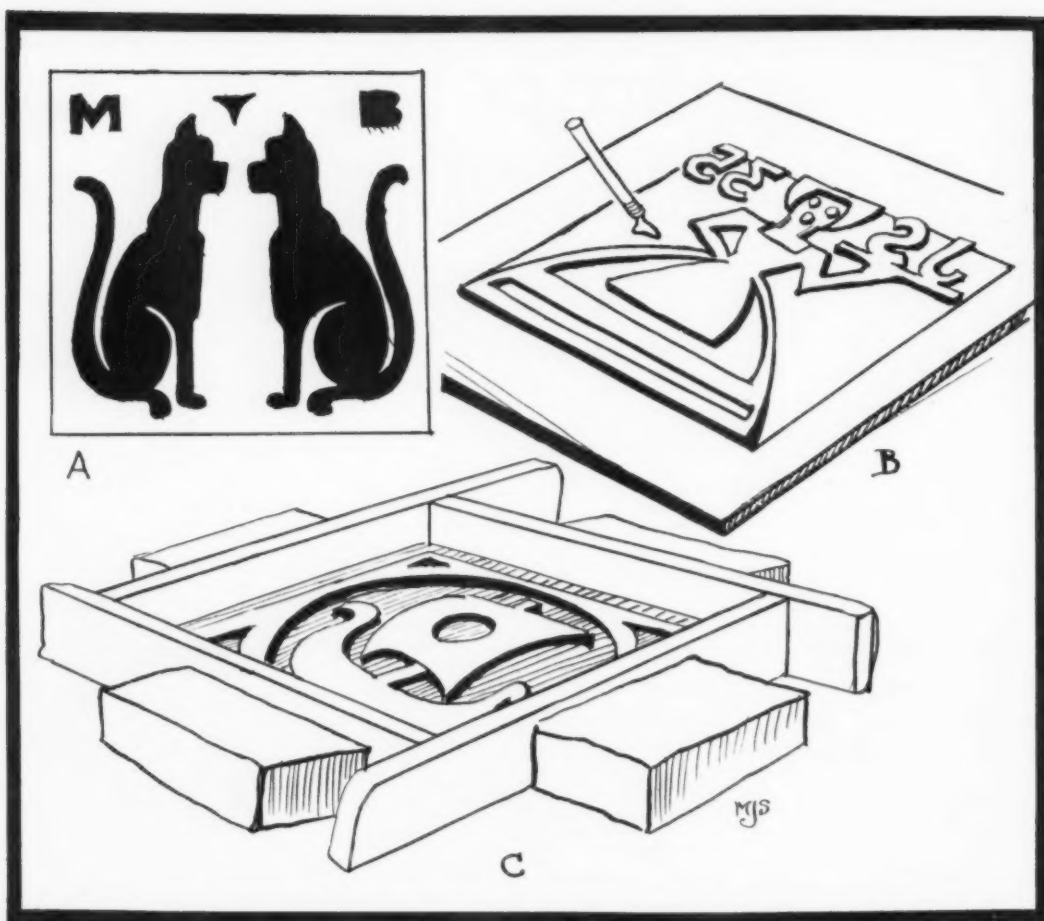
TRANSPORTATION

GRADE 5

	INDUSTRIAL	RELATED	AESTHETIC	CREATIVE
PERIOD	INFORMATION	INFORMATION	INFORMATION	EXPRESSION
WATER Primitive & Modern Trans. Applied to Water. Materials for boats.	Why man sought the Sea. How type of boat depends on the materials available for construction.	Canoes of Europe found associated with Stone Age and lake dwelling remains.	The Viking Ship as sea worthy as New England whale boat of today.	Appl. of a design  cation ship in Applied to a Tea Tile
	How coal and iron resources assisted in the improvements of boats	The first boat (Savannah) to use steam and first allsteam voyage - 1833 - Canadian Vessel.	Pictures of Modern Ship Building. Story of river transportation - "hogging".	Fun and perspective  Color
LAND Primitive & Modern Trans.	How primitive man traveled on land.	How climates and land conditions affected different types of land travel - Caravans, Stage-Coaches, North Conditions.	Poem "The Reddler's Caravan," by Wm. Brightly Franks. Story "Hakim Prince" by Edw. Everett Hale.	Cons.  a hobby horse. Mane and ears made of felt.
	What progress man has made in land travel.	Learning to spell all the modern types also early types of land travel.	How color, line and design have made the automobile more beautiful. Dev. of beautiful scenery by Roads.	Drawing of auto, constructed from rectangle.  Color.
AIR Old and New Air Trans.	Who the makers of first airship were.	Their comparison to birds of air. How nature assists in Air Service.	Pictures of first airplane in comparison to line and form.	Simple construction of an airplane, to be used in landscape. 
	How the new airplane lands, starts etc. How record fights have been made. Use of gas.	The plane used as a means of conveyance for U.S. mails.	Visit to a landing field. How airports assist in the city's growth.	 Drawings of airplanes in landscape.

B. K. Jones

OUTLINE FOR A TRANSPORTATION UNIT RECEIVED FROM BESS K. JONES, RENOVA, PENNSYLVANIA, BASED UPON HER STUDIES AT THE SUMMER SESSION AT PENN STATE COLLEGE



THE PROCESS OF MAKING CEMENT STEPPING STONES

CEMENT STEPPING STONES

MARGARET J. SANDERS

New Haven, Connecticut

EACH pupil in the school first made a paper pattern of his original design for a stepping stone, including his initials and the date. This was made on an eleven-inch square of manila paper and in stencil form, that is, the various parts of the design were cut out with scissors, no fine lines (less than half an inch) being used (See A).

On a large piece of old plank or scrap beaverboard, a layer of soft clay was rolled out with a rolling pin, about a quarter or half an inch thick, and this was also cut to measure eleven inches square.

The paper stencil was then placed face down on the moist clay and all the clay removed from the parts of the design left uncovered by the paper. This was removed by a homemade wire tool, like a hairpin on a handle, somewhat similar to a modeler's tool. All these areas were cleaned out down to the beaver board and left with clean vertical edges (See B).

By leaving the paper on the clay mould and by keeping the clay moist under covers of damp cloth before pouring the cement, it was found unnecessary to shellac the mould,

thus preserving the clay in suitable condition to be re-used.

A wall was then built up around the mould by using four shellacked boards held in place by bricks, leaving a half-inch space all around to form a raised border (See C).

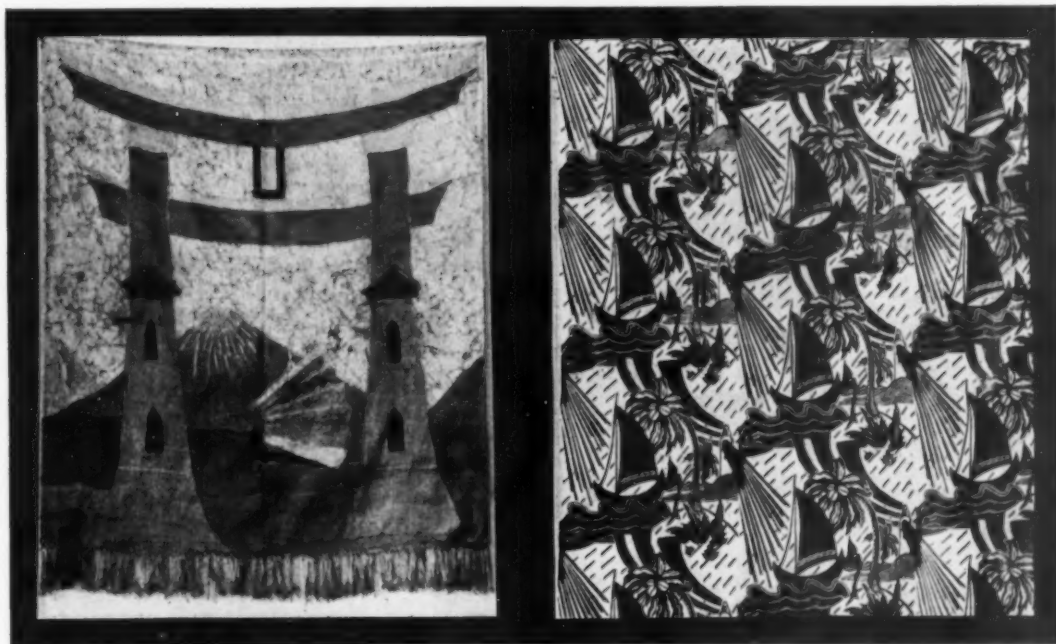
Cement mixed with two parts of sand was moistened with water to a consistency to flow easily.

After two inches of cement was poured into the mould, an eleven-inch square of chicken wire was pressed in, then covered with more

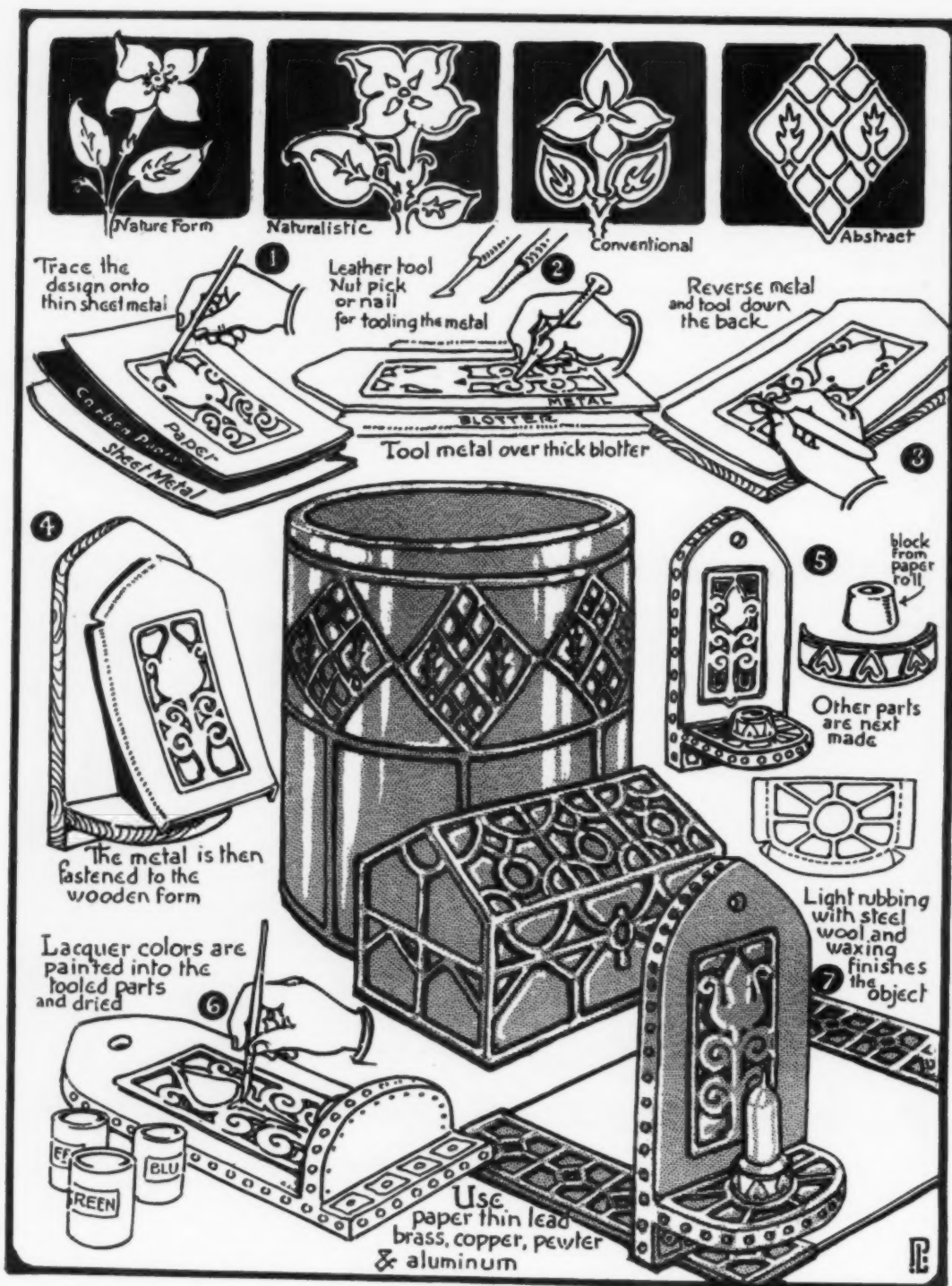
cement until the resulting total thickness was over three inches.

After a week of slow drying, during which the work was kept covered with wet burlap, the clay was easily scraped and washed from the face of the block and a thin coat of pure cement mixed with water was brushed over the surface.

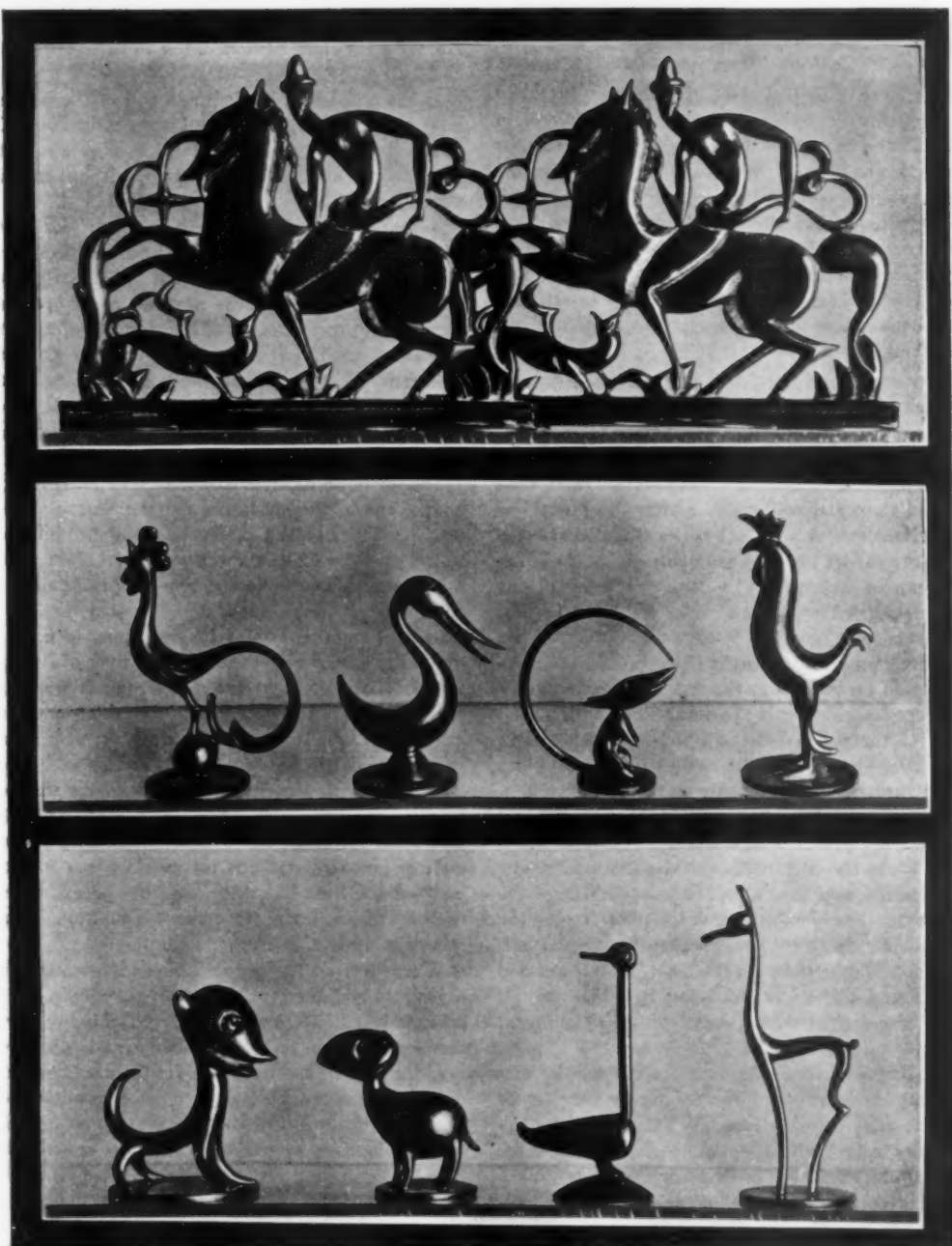
As this work is too heavy to move from place to place, it is well to do it outdoors or on a porch where it may be left until completed without being disturbed.



BATIK BY MAXINE PETERSON, SOPHOMORE, RIPON HIGH SCHOOL, RIPON, CALIFORNIA. NADEAN TUPPER GONZALES, ART INSTRUCTOR. "TROPICAL WATERS," TWELVE-INCH BLOCK PRINT FOR A TEXTILE DESIGNED BY NADEAN TUPPER GONZALES, ART INSTRUCTOR, RIPON HIGH SCHOOL. SCARLET INK WAS USED ON TAN SILK



ONE OF SIXTEEN PAGES OF THE NEW "SCHOOL ARTS" PORTFOLIO, "ART METAL CRAFT." EACH OF THE PLATES IS BRIMFUL OF EASILY FOLLOWED IDEAS FOR METAL CRAFT TO BE USED IN THE CLASSROOM. PUBLISHED BY THE DAVIS PRESS, WORCESTER, MASS.



ONE OF THE PLATES OF THE THIRTY-SIX INCLUDED IN THE "MODERN ART" PORTFOLIO, "NOVELTIES AND JEWELRY." THIS PORTFOLIO HAS A WEALTH OF MATERIAL FOR THE TEACHER OF ARTS AND CRAFTS IN THE SCHOOL. THERE ARE THREE COLOR PLATES INCLUDED IN EACH OF THE "MODERN ART" SERIES

ART METAL WORK

(Continued from page 602)

of the elements, or just some of them may be easily rearranged, to produce vases quite different in design. The vase can be made all in one metal, or in any two or even three metals. For example, the tray may be copper, the large rosette brass, the small one copper, the tube brass and copper wires. Another arrangement might be brass tray, aluminum large rosette, copper small rosette, copper tube and brass wires. The vase is completed by inserting a flanged glass test-tube of the proper size, and six inches long, into the metal tube.

PROBLEM No. 5, the finger bowl, is made from a five-inch circular disk of planished metal. Divide the circumference into eight parts. The copper used in this project should be 24-gauge, cold-rolled and annealed. It should be much softer than that specified simply as cold-rolled. After this metal has been planished, it will feel softer than that with which the earlier projects are made. A pair of one-inch shaping sticks should be cut to a depth of one and one-half inches, to raise sides of bowl. Do not attempt to raise bowl full height in one round. First complete round should bring sides up about three-quarters of an inch from the flat, the next an additional one-half inch, and the next will bring the total height of the side to one and one-half inches from the table. Care should be taken to raise all sides equally, keeping bottom firmly on the table throughout the process. The corners can be rounded and made more uniform with the flat and round-jawed plier. Place the plier with the slight rounded jaw on the inside, and the flat side on the outside of the corner. Slowly close the jaws of the plier, forcing the rounded jaw down into and separating the corner. Then, not holding the plier too tight, slide the closed jaws around the corner, shaping it. Treating all eight corners thus will make them quite uniform. (See drawing "n," Plate 5.)

An octagonal sided tray, cut from a six- by six-inch planished square of No. 24 gauge metal, goes with the finger bowl. This has the usual one-half-inch sides, raised with the regular one and one-half-inch shaping sticks. (See drawing "o," Plate 5.)

As the cold-rolled metal comes beautifully polished, it will need very little polishing when completed, if work has been carefully done. Hammers and planishing blocks must be polished to mirror smoothness. Never use the planishing hammer and block for any other purpose, and these will remain in perfect condition. The condition of the hammer and block is reflected in the planished metal, as beautifully textured surfaces, or as a fine metal marred by nicks and dents.

Should the planishing block accidentally receive a few scratches or dents, these may be removed by rubbing the block over a full-sized sheet of emery cloth, laid on a perfectly flat table. Start with the coarser cut, and end up with the finest. The coarseness of the initial sheet is decided by the depth of the

scratches. If these are quite deep, use the coarse No. 2 emery cloth at first, using in turn, No. 1, 1/0 and 2/0.

If the polished, rounded pein end of the hammer is to be refinished, place head upright in vise. The end to be polished should stand as high above the vise jaws as will allow a firm grip, without marring the other end.

Tear one and one-half-inch wide strips, lengthwise of the cloth, and pull these back and forth over the hammer head, in all directions. When strip wears out, change to one of the next finer cut of emery cloth. Continue thus, until finest grade of abrasive has been used, when hammer will be perfectly polished. If scratches are deep in the face of the hammer, several strips of the coarsest cloth, No. 2 emery, should be used, before using the next finer grade.

Should it be desired to polish the pieces bright, any of the numerous liquid metal polishes may be used. Pieces like the candlestick and the bud vase would be best polished thoroughly, before finally assembling. Some like the tones copper and brass turn, if left unpolished and allowed to slowly oxidize. Sometimes oxidation on copper is hastened by immersing in a weak solution of liver of sulphur. Prepare the piece by washing thoroughly with soap and hot water, to which a little washing ammonia may be added, to free the surface of all dirt and grease. Rinse in hot water, and handle as little as possible, before immersing in the oxidizing solution. Leave in only a few moments, rinse in hot water, and allow to dry. Little more than a cube, one-quarter-inch by one-quarter-inch by one-quarter-inch, of the liver of sulphur, should be added to a tumbler of hot water, to make the solution. Make quantity needed in this proportion.

When dry, the copper will be a bluish-black, the brass just slightly tarnished, and aluminum hardly affected at all. With a bit of dry polishing material, like jeweler's rouge, and a little tripoli on a soft rag, the oxidized copper can be toned as much as desired. Rubbing, at first, polishes off the high places that surround each planishing mark. More rubbing lightens up the tone more, by reaching the depressions forming each planish mark, and removing a little of the oxidation. If solution is made too strong or a piece of metal work is left in it too long, the oxidation will scale off in places. Liver of sulphur should be bought only in the sealed one-pound container. Open, and put small amount into dry, small glass jar with tight fitting lid, for daily use; and close and seal the larger container. If kept thus from exposure to air and moisture, it will keep.

NOTE: These projects and technique were especially designed for the use of the blind and will be published in Braille. As developed, they seem interesting as projects, not only because they are unique, but because of the limited amount of equipment required. This should commend the technique to those wishing to introduce art metal work without the expense of special equipment.

YOU ARE HANDICAPPED IN YOUR CLASS WORK WITHOUT

APPLIED ART . . .

by **PEDRO J. LEMOS**

Director Museum of Fine Arts, Leland Stanford Junior University.
Editor "The School Arts Magazine."

THE SUBJECT matter is graded, being divided into eight elementary and four advanced grades, with grade lesson outlines given in the last two chapters of the book. These grades correspond to eight years of grammar school and four years of high school work. Aside from the study of drawing, painting, and design, in black and white and in colors, chapters are given to cut-out and border patterns, simple modeled objects, lettering, magazine illustration, handicraft, and poster art. The handicrafts described and illustrated are: stenciling, block-printing, Batik, tooled leather, gesso, metal, and cement pottery work.

APPLIED ART is unique among art books, in that the text is reduced to the minimum, and by illustration the author appeals directly through the eye for an understanding of nearly every problem, whether in line, mass, color, or composition, that can arise in the application of all the means of pictorial presentation. A whole library in one book, which you cannot afford to be without, which is attested to by over 45,000 art instructors who now enjoy its help in the classroom.

MR. LEMOS is an authority on art in education, and in recognition of his work as an author and teacher, he was recently elected Fellow of the Royal Society of Art of England. In this book he is passing on to others the knowledge he has gained through many years of teaching and practical work.

Price, \$5.00 POST PAID
Formerly \$6.00

A big illustrated circular, in colors, showing sample pages is free for the asking.

Published by

**PACIFIC PRESS PUBLISHING ASSOCIATION, MOUNTAIN VIEW
CALIFORNIA, U. S. A.**

New Art Books

BLOCK PRINTING WITH LINOLEUM, second edition, by Henry Frankenfield. The C. Howard Hunt Pen Company, Camden, N. J. Price 25 cents.

With a new cover design actually printed with the linoleum block, the second edition of "Block Printing With Linoleum" becomes a more vital addition to the field. There are many new illustrations to add to the interest of this new publication, many of which show new types of technique, and are applicable to the schoolroom or the home craftsman.

The text is rewritten to include the application of this craft to its many interesting adaptations. Written for the craftsman and the schoolroom, this manual will be a worth-while addition to your collection of books on the subject.

The book is 6 by 9 inches in size, contains 48 pages, and is liberally illustrated with block prints.

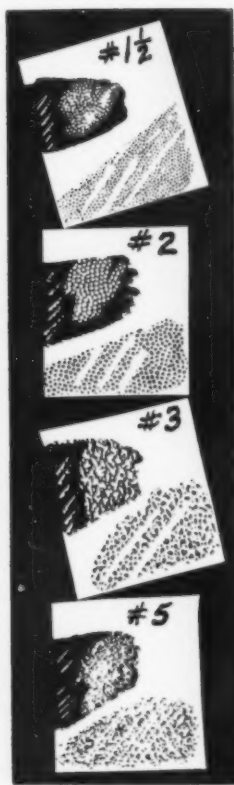
* * *

ART WEAVING, by Frieda Kean, Assistant Director of Vocational Activities, Department of Education, New York City. D. C. Heath and Company, New York and Boston. Price, \$1.16.

This small but compact book is a splendid introduction to the Art of Weaving, an art which has been handed down from artisans of the past in Central and Northern Europe, Egypt, Asia and the East. An abbreviated history of those woven patterns

we so glibly refer to as old friends—Hardanger, Oriental Rugs, Tapestry, Tekke Bakhara, Kashmirs, Shirvan, Turkoman, etc., gives students a quite satisfactory knowledge which they may have missed heretofore. Then there is a list of the various materials used in art weaving, such as cotton, linen, wool, silk, etc. A chapter on designs, dyes, and the various weaving processes for Oriental Rugs and Tapestries, with period reference and illustrations. Colonial weaving has a chapter, bringing us down to our own American looms and some of the more familiar patterns. The author is the instructor in art weaving at the College of the City of New York. Her experience has shown her the real need of a book like this which provides a theoretical and cultural background for a practical course in hand weaving. While the approach is elementary, the door is wide open for more extensive as well as intensive study of any particular department of art weaving. It is a good book. Size 5½x8 inches, 120 pages, fully illustrated.

Of considerable interest in educational circles is the appointment by The American Crayon Company of Mr. Charles G. Scott, West Chester, Pa., to the position of Catholic Educational Director. The American Crayon Company looks upon Mr. Scott as one of its most able and experienced representatives and his many friends in the eastern schools will wish him well in this important new post to which he has been appointed.



SPECIAL \$2.45 OFFER

Postpaid

To Art Teachers and Students

one order to each

8 Assorted Numbers of Ross Drawing Board, Size 11/14

or

8 Sheets of any of the Illustrated Numbers, Size 11/14
Reg. Price \$5.60

1 Negro Pencil, Deg. 1

Through the courtesy of Koh-I-Noor Pencil Co.

ROSS DRAWING BOARDS

The white lines through the black on samples is obtained with a sharp knife by scratching and erasing the surface of the drawing board

also

a copy of our new book, "Scratch Board Techniques," with 30 different drawings on Ross Drawing Boards, and our sample swatch.

You can scratch every Ross Board

CHAS. J. ROSS COMPANY

1525 Fairmount Avenue - Philadelphia, Pa.



Miss Sarah Louise Arnold, formerly Supervisor of Schools in Boston, Mass., in her "story" about "The Use of Pictures in the Schoolroom," published by The Perry Pictures Company, tells of many experiences when visiting schools where picture study was in progress. "Ragged, unkempt little fellows, whose homes were barren and unlovely, and whose wayward feet were used to all the streets and alleys of the crowded city—what could they care for a picture gallery?" Listen! "We have been to see the pictures in Mr. Bray's gallery! Miss Brown asked him and he let us all in! You ought to see them!" Then the descriptions came pell-mell. "You ought to see that picture of the sheep out in the storm. It looked so dark and lonesome, and the sheep were all huddled together, and I shivered when I looked at it!"

The Perry Pictures Company, under the personal guidance and inspiration of Eugene Ashton Perry, who had been master of a grammar school and thus in a position to know the needs and limitations of art education, has been the means of opening the eyes of many a child to appreciate beauty. Perry Pictures as an institution started in 1897 with just two pictures—Longfellow's portrait and his Cambridge home. Perry Pictures today number nearly 3000 subjects, and are published in black, in sepia, and in full color. Their use has extended from Malden, Mass., to every town and hamlet in the United States and nobody knows into how many

foreign countries. Picture study is now a required subject, and The Perry Pictures Company are to be commended and complimented for the many graded courses offered at an unbelievably low price for such excellent reproductions.

In writing for a catalog, be sure to have included "The Story of the Perry Pictures" by Irene Weir, and "The Use of Pictures in the Schoolroom," by Sarah Louise Arnold.

* * *

Interesting to note in the new Speedball Water Soluble Ink circular, by C. Howard Hunt Pen Company, Camden, N. J., manufacturers of Speedball Linoleum Cutters, are the colorful illustrations, and the use of linoleum blocks for a commercial circular. These circulars were actually printed with linoleum blocks. There were eight colors to be registered, and the edition was run for 50,000 copies. The blocks bore the pressure well and are still usable. It is well to know this and compare cost of printing with color using hand-made linoleum blocks as compared with other commercial processes.

* * *

Binney & Smith Company are sponsors of an exhibition called "Young America Paints," which opened in Rockefeller Center the last of March, continuing two weeks. The exhibitors are children in public, private, and parochial schools of more than a



NO COLD SPOT

(One of a dozen reasons why
Ceramic Kilns win friends
daily from coast to coast!)

The **MULTIPLE TUBE MUFFLE**
distributes heat *uniformly* through-
out the load . . . in front of the door
as well as everywhere else.

RESULT: uniform firing of the
entire charge. Less loss of ware. Ex-
perimental work greatly simplified.

Investigate **KERAMIC KILNS** . . .
fully before you buy any kiln. Bul-
letin 360 for complete data . . . free.



hundred American cities, who sent pictures they made in the two mediums called for—frescoe and Shaw finger paints. Miss Marie C. Falco, Art Director of Binney & Smith Company (is there anyone who does not know and appreciate Miss Falco?), has this to say in regard to this exhibit: "The great human and educational value of the work of hundreds of youngsters is that the pictures represent spontaneous self-expression. Both the mediums represented here are easy to use, and thus reduce to a minimum any technical obstacles to the usual art expression. It is just like play—and the young artists achieve results easily and quickly, before the inspiration fades or loses any of its imaginative freshness." The exhibit has started on a tour of many cities throughout the United States. If you will inquire of Binney & Smith or **SCHOOL ARTS**, perhaps a list of the cities may be supplied. The exhibit is worth seeing.

* * *

A well-dressed salesman is a fundamental requirement in business today. The idea has been extended to include almost every article of commercial, industrial, professional, or any other use. The modern package must be beautiful to attract attention. At least, it must be original in design and striking in color. This modern trend has found the Chas. M. Higgins & Co., well-known originators

School Arts, June 1937

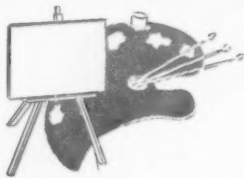
and manufacturers of inks and adhesives, right up to the front. In fact, "for sales value and general attractiveness the newly designed labels and bottles of Higgins' Eternal Black and Higgins' Blue Black Writing Ink won Honorable Mention in the Fourth Annual 5 and 10 cent Packaging Contest recently held in Rockefeller Center, New York." The other points on which entries were judged were durability and protection to contents and low production costs. These Higgins' bottles were the only stationary items to win an award in this contest. This company is to be congratulated for their success in this contest.

* * *

While we are on the Higgins' Ink matter, it will be of interest to many to know that Mr. Tracy Higgins, President of the company, went to Europe the last of April, where he was to visit the British branch of his company in London (and incidentally see the Coronation procession!); he will then see the agents and distributors of Higgins' products in Norway, Sweden, and Denmark; and later visit the French International Exposition in Paris.

* * *

Dr. Henry Turner Bailey used to say, "Draw and the child draws with you; talk and you talk alone," which was his unique way of saying that children gain more by the eye than by the ear. Pictorial representation is fundamental in all education; in



MACY'S is headquarters for your ARTISTS MATERIALS and CRAFT SUPPLIES . . .

SUPPLIES FOR SKETCHING AND DRAFTING

Water color blocks 19c to 3.29. Spiral pads 11c to 47c. Drawing pencils from 4c each to 1.88 set of 24.

PAINTING SUPPLIES

Oil sets complete 39c to 14.89. Water color sets complete 47c to 9.97. Pastel sets complete 93c to 9.87. (Sorry, we cannot deliver pastels because of breakage). Canvas Panels from 8c to 1.09.

BEADCRAFT AND WEAVING

Sets complete from 94c to 1.41. Separate Beads 3 strands for 14c. Looms 9.97 to 29.95.

Our assortment of equipment for artists and craftsmen includes a wide variety of tools and materials for metal, leather craft work and wood-carving. Easels range from 94c to 9.39; drawing tables from 2.34 to 14.09. Children's smocks are 1.39; smocks for adults 1.49 to 3.69. Save 6% at Macy's low prices. Mail and phone orders filled.

MACY'S ARTISTS MATERIALS, FIFTH FLOOR . . 34th St. & B'way, N. Y. C.

CLAY MODELING AND SOAP SCULPTURE

5 lbs. moist clay in can 38c. Plastic clay 1 lb. 23c; 5 lbs. 1.02. Tools, 9c to 1.98 each; armature 89c to 3.29. Soap Sculpture sets 47c.

ELEMENTARY ART SUPPLIES

Fingerpainting Sets 1.64 to 3.72. Frescol 84c—2.82. Manilla Paper 47c and 69c package—Assorted colored paper 28c package.

BLOCK PRINTING

Sets complete 47c to 1.34. Separate blocks 5c to 47c. Ink 23c to 42c. Rollers 34c to 94c.

art education, no appeal is greater than that of beautiful pictures.

A few—a very few—beautiful pictures on a schoolroom wall have a cultural value not to be overestimated. Good pictures create a beneficent atmosphere, whereas bare walls are depressing.

Furthermore, a good course in picture study should be in every art teacher's program. The best prints only should be used. Among such are the Medici Prints, whose peculiar excellence is due to the special method of photographic collotype in colors, without "screen," perfected under the direction of the Medici Society of London, which was founded in 1908 by a group of English gentlemen, moved by the high ambition to publish perfect, direct reproductions in full color of paintings by the Great Masters and to make them available to everyone at a moderate price.

The Medici Prints are printed upon pure hand-made linen paper specially manufactured for the purpose, without chalk surface or any other glazing.

A course of study, with Medici Prints for reference, and a few of these prints on the walls to give bright spots of color to the schoolroom, will make art teaching a pleasure and a success.

Let us send you some of the literature about the Medici Prints. Ask for T.E.B. No. 1001.

Paint in the form of a stick of crayon—with the advantages of both! That's the story in a nutshell—two mediums combined for less than the price of one.

Do all your regular crayon drawing just as you always did but, when you need a touch of water color for background or if you decide on simple color studies, a brush and clear water transforms your crayon markings into brilliant water color.

Payons are an improved pressed crayon to which properties peculiar to itself alone have been added, which makes possible many new and fascinating art techniques.

Now it will be easy to do the type of work you see in so many of the modern magazines where part seems to be done in crayon and the balance in water color. In school systems where price is a factor, Payons will be found most economical.

Send for beautiful free color folder telling the complete story of these new and amazing "painting Crayons"—PAYONS.

* * *

Recently at the Biltmore Hotel, New York, a luncheon was tendered to Mr. S. Vere Smith, Chairman of the Board of Directors of the Binney & Smith Company.

Mr. Allan F. Kitchel, President of the Company, was toastmaster, and Miss Marie Falco, who has

LEATHERCRAFT

at $\frac{1}{3}$ the price
you would
expect to pay



A new tooling leather that offers the same possibilities for school craft work as calfskin at about $\frac{1}{3}$ the price! This is our new Grained Sheepskin, offered in an attractive variety of finishes and colors. It tools as readily as calfskin and has a smooth back that eliminates lining leather if desired. Its possibilities as a craft leather for school work are unlimited and its price amazingly low.

Send for our free 1937 catalogue for complete information on this genuine tooling leather at approximately $\frac{1}{3}$ the price of calfskin.

HAVE YOU PURCHASED YOUR COPY OF THE "LEATHERCRAFTSMAN" ?

A complete and sound textbook on leather work, 16 Chapters
... 176 Pages ... 112 Illustrations.

Makes Leathercraft Easy to Teach

\$1.50 Heavy Paper Cover - - - \$2.00 Cloth Binding

LEATHERCRAFT STUDIOS

GRATON & KNIGHT CO. - 358 FRANKLIN ST. - WORCESTER, MASS.

been with the Company thirty-four years, made the principal speech.

Having known Mr. Smith since he was nine years of age, Miss Falco was in a position to take her listeners behind the scenes with an account of many humorous incidents in Mr. Smith's early life, as well as accentuating his loyalty, faithfulness, kindness and patience, to his family, his friends, and his Company.

Mr. Kitchel presented Mr. Smith with a beautiful silver loving cup in behalf of his co-workers.

While the luncheon was strictly a Company affair, many telegrams of felicitation were received, and on Mr. Smith's return to his office he found himself in a veritable bower of roses and spring flowers.

* * *

When we speak of "Scratch board," or as the English artists call it, "Scraper board," we speak in generalities; but when we say "Ross Board," that brings it down to common, everyday experience. All who touch artistic pen or crayon to card or paper for purposes of illustration, are familiar with Ross board. Now turn to the advertising section and note the unusual offer of eight sheets of these unexcelled drawing boards, a No. 1 drawing pencil, and a copy of the new book, "Scratch Board Techniques," all for one-half the price of the drawing board alone.

School Arts, June 1937

Each spring the New York School of Fine and Applied Art awards scholarships to the outstanding student in each department, entitling the recipients to two semesters of post-graduate study in the Paris Ateliers of the School. The students who have received the awards this year and who sail for France late in May, are:

MRS. WILLIAM K. VANDERBILT SCHOLARSHIP—
Department of Advertising Design.

To Mr. Charles Heilemann, 349 Irving Avenue, Brooklyn, New York.

MRS. ARCHIBALD M. BROWN SCHOLARSHIP—
Department of Interior Architecture and Decoration.

To Miss Muriel V. Husted, 159 Grove Street, Tarrytown, New York.

FRANK ALVAH PARSONS MEMORIAL SCHOLARSHIP—
Department of Teacher Training.

To Miss Olive Weigester, 410 Caston Street, Troy, Pennsylvania.

FRANK ALVAH PARSONS MEMORIAL SCHOLARSHIP—
Department of Costume Design and Illustration.

To Miss Emily Sigal, 300 Riverside Drive, New York, New York.

Remember! The larger size SCHOOL ARTS in September—a bigger and better magazine. Don't miss it! Renew now. Same price, \$3.00.

These Pencils suggest
NEW USES
in the Art Class



Interest in Color Sketching reaches a new high where MONGOL COLORED Pencils are introduced. *First*, because of the wide range of colors available. *Second*, because you can PAINT with Colored MONGOLS. "Wash" tints are easy with brush and water, also attractive spatter and variegated color effects. *Third*, because these pencils are so practical and convenient. Their strong thin leads are *guaranteed not to break in normal use* and can be sharpened to a needlepoint in an ordinary sharpener.

You'll find Colored MONGOLS ideal for ordinary Sketching, for Architectural Renderings, for Advertising Layouts, for Map Work, for Statistical Charts and many other purposes.

Write Eberhard Faber Pencil Co., Dept. SA 47, 37 Greenpoint Ave., Brooklyn, New York, for attractive leaflet describing this versatile pencil, or better still . . .

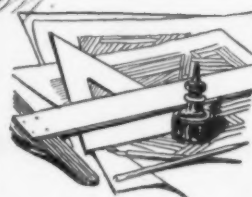
"Say MONGOL to your Stationer or School Supply House."

MONGOL
Colored
PENCILS



EBERHARD FABER
The Oldest Pencil Factory in America

14-a



Gillott's
**PENS for DRAW-
ING PERFECTION**

FOR over 100 years, Gillott Pens have been standard with both the beginner and the master in pen and ink work. Their marvelous temper and adaptability enables an artist to put his ideas on paper quickly, accurately and efficiently.

The Gillott Line of Drawing Pens is complete—a type for every need. 25 cents will bring you a sample set of six pens—\$1.00 a complete set of twelve, including three of the exquisitely fine points. Send for a set today.

ALFRED FIELD & CO., INC.
93 Chambers Street, New York, N. Y.

WHATMAN Genuine
Hand Made Drawing Papers
will enhance the brilliance of
your colors, and by withstand-
ing constant erasure, prove a
sympathetic dependable me-
dium for your subject.

J. WHATMAN
GENUINE HAND-MADE DRAWING PAPERS
H. REEVE ANGEL & CO. INC.
7-11 SPRUCE ST.
NEW YORK, N. Y.

School Arts, June 1937

